2010

INTERPRETING THE ARCHITECTONICS OF POWER AND MEMORY AT THE LATE FORMATIVE CENTER OF JATANCA, JEQUETEPEQUE VALLEY, PERU

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ABSTRACT OF DISSERTATION

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The Graduate School

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ABSTRACT OF DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Arts and Sciences
at the University of Kentucky

By
John Powell Warner

Lexington, Kentucky

Co-Directors: Dr. Tom D. Dillehay, Professor of Anthropology
and Dr. Chris Pool, Professor of Anthropology
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This works examines the Late Formative Period site of Jatanca (Je-1023) located on the desert north coast of the Jequetepeque Valley, Peru. Je-1023 is a complex site made up of numerous free-standing compounds that are organized around several predictably located, replicated interior complexes that were important in determining the overall shape and interior organization of the site. While this work relies on a number of data sets traditionally used by archaeologists as a means of examining prehistoric cultures such as ceramics, ethnobotanical analysis, and the surrounding relic landscape, architectural analysis is the primary means by which Je-1023 is examined.

This work elucidates a number of archaeological issues at a variety of scales of consideration. From the level of the compound up to the entire North Coast, sociopolitical organization, the interface between behavior and architectural design, interior access patterns and social ordering, labor organization, and the impact of social memory in architectural design are all considered by this work.

KEYWORDS: Andean South America, Late formative Period, Architectural Analysis, Settlement Patterns, Landscape Analysis

John P. Warner

September 1, 2010

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For Christy and Meghan

ACKNOWLEDGMENTS

The completion of this dissertation would not have been possible without the input of many people with whom I have had the pleasure of working with and knowing for over the last 15 or so years. Four people are especially deserving of my profuse thanks as they put in what must have seemed like as many hours as I did into the completion of my dissertation. First and foremost I must thank Dr. Tom Dillehay for being my advisor at the University of Kentucky, taking me into the field between 1997 and 1999, serving as the chair of my committee, guiding me through the process of writing a research design, and patiently coaching me through the write-up phase draft after draft. Clearly, this work could not have been completed without his tireless input, and for that he is thanked profusely. I must also thank my wife, Dr. Christina Warner, for working with me in Peru, encouraging me at every turn, and getting out of archaeology and going into medicine, which has enabled us to pay our bills while I took time off to write and continue to work in the field. As with Tom, this project could not have been completed without her help. Dr. Edward Swenson must also be singled out and thanked for his efforts in helping me through this long process. Eddie was kind enough to help get me started during my dissertation year by leading me through the permitting process at the Lima *Instituto Nacional de Cultura* office, providing me with essential advice and sound critique of my initial ideas, and most importantly making me laugh at the absurdity of the many extraordinary situations I found myself in during the course of my year-long stay in Peru. During write-up, Eddie was kind enough to provide cogent comments on my ideas and listen to me ramble endlessly about social memory. Finally, I have to recognize James Crandall for special thanks in helping me during the excavation phase of this project. James came to Peru based on only a short introduction and phone conversation, endured nearly four months of terrible food and inhumane living conditions, and never complained once. Subsequently, I have had the pleasure of working with James for four additional seasons in Peru and look forward to many more. Special thanks to all four of you.

Prior to beginning fieldwork in Peru, I had the pleasure of receiving professional guidance from a number of people affiliated with The University of Central Florida, The University of Kentucky, and the University of Chicago. In addition to Tom, these people include Dr. Arlen Chase, Dr. Diane Chase, Dr. Chris Pool, Dr. Dick Jeffries, Dr. John Watkins, Dr. William Adams, Mrs., Nettie Adams, Dr. Alan Kolata, and Dr. Mary Lucas Powell. I thank all of you for your time over the years in a variety of capacities such as taking me into the field, serving on my committee, provided stimulating discussions and lectures in seminars, and reading my wretched term papers filled with half-baked ideas.

During the time that I worked for Tom Dillehay and Alan Kolata in the Jequetepeque Valley, I came to know a number of people in a myriad of capacities from graduate students to the many locals who helped me with the logistics of life in Peru and patiently endured my clumsy attempts to improve my Spanish. In this capacity, I wish to thank Dr. Jose Iriarte, Dr. Greg Zaro, Bevin Ethridge, Mirtha Cruzado, Sandra Sanchez, Dr. Mario Pino, Dr. Ducio Bonavia, Dr. Luis Jaime Castillo-Butters, Jeff Stvan, Dr. Gregory Maggard, Dr. Kary Stacklebeck, Dr. Victor Vasquez, Manuel Mora sr., Manuel Mora jr., Nora Mora, Eduardo Castro, Mariela Castro, and Idalia Carrera. Thank you to all of you for time, patience, and support.

During my dissertation year, I was fortunate enough to have several people come to Pacasmayo, Peru to work for me, or to visit and provide a much-needed diversion. In addition to Tom Dillehay, Edward Swenson and Christina Warner, this list includes Jorge Chiguala-Azabache, Colleen Donnelly, Dan O’Conner, Kay O’Conner, Elizabeth Briceño, Elsa Briceño, Chris Hellman, Cristin Rolf, Mike Morzenti, Dr. Matt Noble, and Dr. Beth Noble. Thanks especially to Dan who was kind enough to spend three-months of his life in Peru working on this project.

In addition, I was fortunate enough to meet several people during 2004-2005 that have since become valued friends and I would be remiss if I did not specifically mention Dr. Robyn Cutright who was always ready to share a beer and trade some *chisme* on the balcony of the *Estación*. In this same capacity I wish to thank three additional friends, Howard Tsai, Abigail Levine, and especially Dr. Carol Mackey who was always kind enough to share with me her vast knowledge of North Coast architecture and ceramics. Special mention must also be given to Elizabeth Briceño who worked for me tirelessly in the field, kindly corrected my Spanish, and took me into her family as her honorary *hermano gringo*. Thanks to her and the entire Briceño family with whom I enjoyed so many delicious meals. I also need to give special thanks to two other project members, my co-director Juan Casteñeda Murga and my site inspector from the Trujillo branch of the *Instituto Nacional de Cultura*, Cesar Galvez. Both went out of their way to help keep the work represented by this dissertation project moving forward.

While most of the data used in this dissertation was gathered during my 2004-2005 field season, subsequent work at Jatanca with Edward Swenson and Jorge Chiguala-Azabache (2007-2010) provided additional insight and refinement into many of the ideas presented within this work. During that time, we were fortunate enough to have a number of students return over the course of several seasons to work with us including Jason Hodge, Randy Hahn, Katrina Burch, and Anna Guengerich. It would be an error if I did not single out Anna to thank her for her four seasons of hard work on this project, her insight, and her kind words of encouragement. Thanks also to all of the additional students from Eastern Kentucky University, University of Lethbridge, and the University of Toronto who have worked on this project between the years of 2007-2010.

Finally, I must thank my now-four year old daughter, Meghan Elizabeth Warner, for being so patient while "Daddy" sat in his office "playing with his computer." Daddy is happy to say that he is finally finished.

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Chapter One: Introduction to the Dissertation

The analysis of space and architecture has a long history within the discipline of Andean archaeology (Bawden 1982, 1996, 2001; Bennett 1950; Dillehay 2004; Donnan and Cock 1986; Isbell 1977; Isbell and McEwan 1991; McEwan 2005; Moore 1996, 2005; Moseley and Mackey 1974; Shimada 1994; Tellenbach 1986; Uhle 1991; Willey 1953). Archaeologists working throughout the region, in both the highlands and coastal lowlands, have relied upon archaeological analysis at a variety of levels from the site to the region as a means of elucidating issues related to economic organization (Chapdelaine et al 2004; Hyslop 1990; Isbell et al. 1991; Kolata 1990; McEwan 2005; Shimada 1994), agricultural production (LeVine 1992; Dillehay and Kolata 2004; Kolata 1990, 1993), sociopolitical organization (Bawden 1982, 2001; Dillehay et al. 2009; Shimada 1994; Uceda et al. 2004), trade and exchange (Mackey and Klymyshyn 1990), mortuary treatment (Bawden 2001; Castillo-Butters 2001; Chapdelaine et al. 2004; Gagné 2009; Grieder 1988), and the expansion of coastal and highland empires (Hyslop 1990; Morris 1992; Morris and Thompson 1985; Jennings and Craig 2001), to name but a few areas of inquiry. This dissertation will analyze space and architecture at a range of heuristic levels as a means of examining the Late Formative Period site of Jatanca (Je-1023), located on the North Coast of Peru within the Jequetepeque Valley (Figure #1.1).

Conceptually, at its broadest, this dissertation is focused upon examining the reciprocal relationship between humans and their constructed environment. Indeed, the built environment, the product of human activity organized at a multitude of levels, has a profound impact upon human behavior (Bender and Winer 2001; Bevan 2006; Brand 1994; Lefebvre 1991; Low and Smith 2006; Quantrill 1987; Parker and Richards 1994; Rapoport 1969, 1976, 1982, 1986, 1990; Vergne 1999; Waterson 1997). Furthermore, the built environment[1] provides numerous cues that inform behavioral activity and are consciously and unconsciously interpreted by an individual or individuals

[1] It should be made clear that additional cues can also inform behavior such as dress, objects, and human activities. However, it is the more permanent cues associated with monumental architecture that are of primary concern to this work.

within a given space (Moore 1996; Rapoport 1982). This is not to say, however, that these same cues, or signals, are not at times misinterpreted, reinterpreted, or contested within and among the sociocultural divisions that make up a society (Bevan 2006; Rapoport 1982). In fact, this dissertation will demonstrate that architectural canons associated with Late formative Period sites along the coast of Peru were revitalized (and perhaps reinterpreted as well) by the Chimú for their own political purposes some 700 years later (see Chapter 9).

Amos Rapoport (1969, 1976, 1982, 1986, and 1990) has written extensively with regard to the complex nonverbal signaling that occurs between the built environment and humans, and argues that in addition to evoking an emotional response in the viewer, the built environment can also impact behavior and actions at the level of the individual through the group. This is due to the conscious and unconscious recognition of, and reaction to encoded architectural and spatial cues, that "guide and channel" human responses (Rapoport 1982:19). According to Rapoport, environmental cues serve as a behavioral aid and allow people to "… judge or interpret the social context or situation and act accordingly" (1982:57). A key to all of the above is the ability to recognize, read, interpret, and react to the physical cues within the environment. Rapoport argues that:

> "…settings somehow communicate expected behavior if the cues can be understood; the code needs to be read. If the design of the environment is seen partly as a process of encoding information, then the user can be seen as decoding it. If the code is not shared or understood, the environment does not communicate" (1982:57).

With this in mind, architecture can be viewed as not only reflecting social organization, but also as an active agent in shaping and reinforcing it as well – an important point discussed at length within Chapters 6-9.

This dissertation will also consider the reciprocal relationship that exists between the constructed environment and human behavior at a multiplicity of levels from the individual to the large group. In this sense, restricted access into the interior of monumental architecture not only reflects the presence of class distinctions, but also reinforces them via visual cues such as narrow entries, baffled entries, winding corridors, and dead-end hallways (Chapter 6). Constructed spaces such as the Plaza/Ramp/Platform Complex are not just areas where rituals were performed, but were also key settings where group unity and social distinctions were spatially defined, reified, and perhaps contested as well (Chapter 7). Furthermore, the configuration of the Plaza/Ramp/Platform Complex not only reflected the presence of dual social organization, but also encoded the inherent tension associated with the development of centralized political control within a matrix of horizontal social ties via the distribution of space and architectural features (Chapter 8). Indeed, as this work will attempt to demonstrate, the architecture of Jatanca was embedded with numerous architectural and spatial cues that in addition to providing archaeologists with information regarding the development and sociopolitical organization of the site, also provided the prehistoric constituents with behavioral information (perhaps both consciously and subconsciously) regarding diverse matters such as architectural access and status, ritual activity, and politics to those who could interpret them.

Yet the application of Rapoport's ideas to any study, architectural or otherwise, provokes a key question that must be addressed: from where does the knowledge one needs to decode environmental cues that prompt behavior come? In other words, how do the spatial and architectural features of an environment communicate to the receiver specific, behavior-based aspects of the room such as the dynamics of power and what constitutes "proper" behavior? Rapoport argues that the process of enculturation – the cross generational transfer of cultural knowledge – is the primary vector by which individuals acquire the information they need to successfully recognize, interpret, and act upon (or "obey") environmental cues (1982).

It could also be argued that this spatial and architectural information is also embedded within the *social memory* (or *collective memory*) of a given group or culture (see Connerton 1989; Halbwachs 1992). Briefly, social memories are those that are held, conveyed, and sustained by groups that can vary in any number of cross-cutting social categories such as size, political affiliation, economic status, gender, or ethnicity. Social memories can vary greatly in their composition from banal events shared among a few, to sacred experiences that are "known" on some level throughout a given community (Connerton 1989). In this particular instance, social memories embedded within a community are an additional means by which spatial and architectural cues are "stored," learned, recognized, responded to, and modified by individuals and groups in some behavioral manner ranging from obedience to defiance.

Of special interest here is that social memories not only provide a means by which the information related to the relationship between the constructed environment and behavioral response can be passed and maintained cross-generationally, but they also become attached to, and may be evoked by both non-material events (rituals, stories, fables, etc…) and material items, one of which is monumental architecture[2] (Bevan 2006; Tuan 1977; Yoffee 2007). The emotional and behavioral ties linked to monumental architecture make these structures valuable tools that can be purposefully manipulated by human agents in order to establish, maintain, or usurp political power (Bevan 2006; Connerton 1989; Dobres and Robb 2000; Yoffee). In some cases, the past is invoked via the archaistic revitalization of architectural forms (acts of remembering) that can be used to create ties to the past and legitimize governments (Bevan 2006; Connerton 1989; Silberman 1989; Van Dyke 2003; Yadin 1966; Yoffee 2007; see also Patterson 2004). The past can also be rejected (strategies of forgetting) or "distanced" via the abandonment, or outright destruction of monumental forms, often in an effort to establish new traditions that can be used for political ends in the formation of new social memories (Hobsbawm and Ranger 1983). In this way, past sociopolitical, ethnic, or religious ties can be distanced or denied with new histories created to fill the historical void (Bevan 2006; Silberman 1989; Yadin 1966; Yoffee 2007). In both

[2] It should be made clear that the interaction between architectural cues and resulting human behavior is not limited to settings that involve monumental architecture and spaces, but is also a part of "ordinary" or vernacular environments as well (see Rapoport 1969, 1982, 1990; Oliver 2003; Waterson 1997). Due to the poor preservation of vernacular architecture at Je-1023, however, this present work is forced to rely upon monumental architecture as a means of examining the issues discussed in this section.

scenarios, a major key in remembering or forgetting the past is the manipulation of architectural forms and their associated behavioral cues for political advancement by human agents. Briefly then, one important reason that social memories are actively maintained, manipulated, and contested within any group is that they can be used as powerful political tools that give shape and meaning to past events which in turn provide justification for then-current events, sociopolitical and economic conditions.

In Chapter 9, the above ideas are examined as it is argued that canons of monumental architecture along the North Coast of Peru were purposefully manipulated so as to affect behavior by creating the illusion of cultural time depth which could be extended into the sociopolitical realm as well. Therefore, this dissertation also examines urban architectural development along the North Coast, and will provide a new understanding of the mechanisms involved both specifically at North Coast sites such as Chan Chan, and generally as a process that combined the purposeful manipulation of monumental architecture by human agents in order to redefine social memory and behavior.

General Introduction to the Study Area

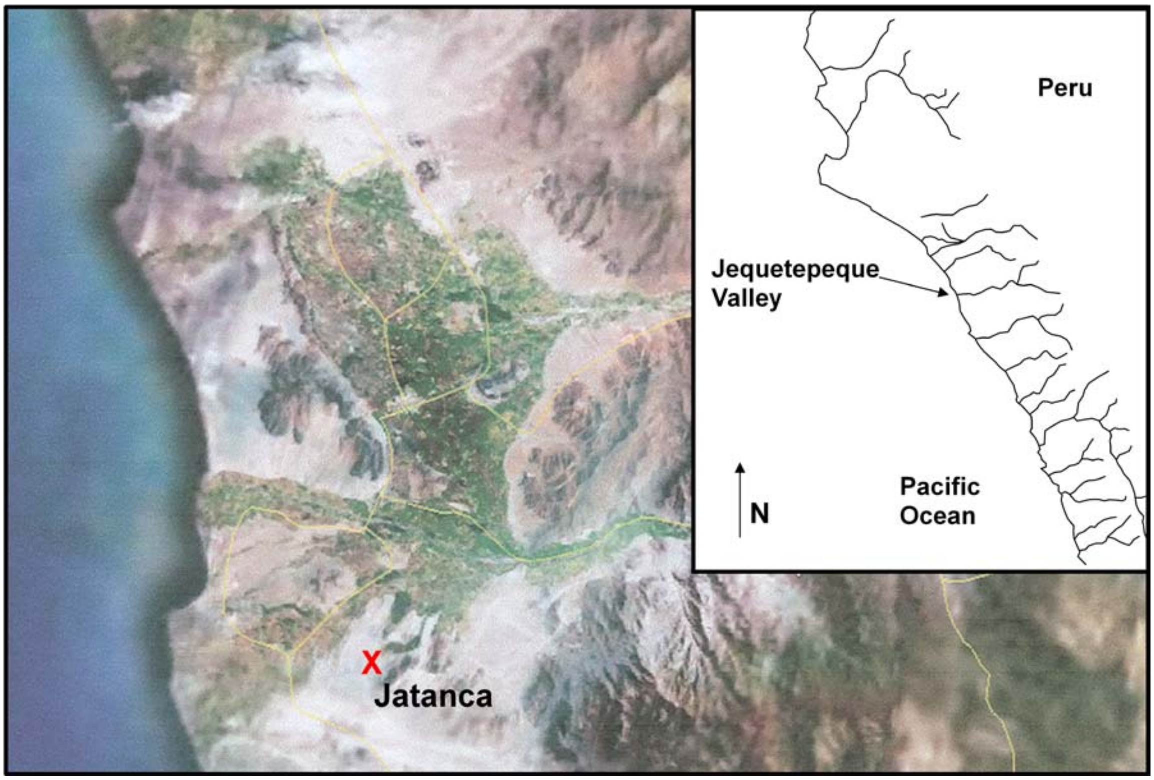
In 2004-2005, I initiated a year-long, three-part program of research within the Pampa Mojucape, Jequetepeque Valley, Peru that included mapping the natural and constructed features of the pampa and the associated standing architecture; a controlled surface collection of the general area; and excavation within architectural compounds and the adjacent canal network. Most of this work was centered upon the Formative Period (approximately 2000 BC to 0) site of Jatanca, or Je-1023, (Figure 1.1) and built upon work initiated by Dillehay and Kolata (Dillehay 2001; Dillehay and Kolata 2004; Dillehay et al. 1998, 1999, 2000, 2004, 2009).

Despite its large size, complex architectural configuration, and prominent valley location, Jatanca has seen relatively little in the way of organized archaeological study. Ubbelohde-Doering excavated within some of the compounds that make up the core of the site prior to the outbreak of World War II, ultimately publishing little of his work

(Ubbelohde-Doering 1966). Jatanca is also mentioned in subsequent Jequetepeque Valley survey work (Dillehay et al. 1998, 1999, 2000, 2009; Hecker and Hecker 1990), dissertation research (Eling 1987; Elera 1998), and briefly within articles (Dillehay 2001; Dillehay and Kolata 2004; Dillehay et al. 2004; Eling 1986), but has never been the locus of a long-term program specifically designed to elucidate the sociopolitical and economic relations responsible for the construction and maintenance of the site. Indeed, despite the complex, well-preserved nature of Je-1023's architecture, a detailed map of the site had never been published.

Specifically, Je-1023 is located on the North Coast of Peru within the southern Jequetepeque Valley on the Pampa Mojucape, and is surrounded by relic agricultural fields and irrigation canals which date in use from the Formative Period through the Late Intermediate Period/Late Horizon (see also Dillehay et al. 2009; Eling 1987; Hecker and Hecker 1990). While the construction and use of most of these canals likely post-dates the occupation of Jatanca (Dillehay and Kolata 2004), some of them were used during the Late Formative Period as evidenced by radiocarbon dates acquired from charcoal within nearby canal cuts (see Chapter 5). These canals drew water from the nearby Quebrada Cupisnique, which ultimately dried up sometime around AD100; ultimately forcing residents to abandon the site (Dillehay – personal communication; see Chapters 3 and 5). Today, the environment surrounding Je-1023 is largely that of a desert, although pockets of naturally-pooling freshwater are found to the north of the site during ENSO events (Dillehay 2001; Dillehay and Kolata 2004; Dillehay et al. 2004; Eling 1987; see also Chapter 3).

Figure 1.1 - Location of Jequetepeque Valley and Jatanca (Modified from Google Earth)



Architecturally speaking, along with Pacatnamú (Donnan and Cock 1986, 1997; Hecker and Hecker 1985), Tecapa (Dillehay et al. 2000; Hecker and Hecker 1990; Ubbelohde-Doering 1966), Dos Cabesas (Donnan 2009), and Farfan (Keatinge and Conrad 1983; Mackey 2006), Jatanca is one of the more architecturally impressive sites within the Jequetepeque Valley, and represents one of the largest occupations during the Formative Period within the Pampa Mojucape area, if not the entire Jequetepeque Valley (Dillehay et al. 1998, 1999, 2000, and 2009; see also Chapter 3). The core of the site is made up of eight compounds of varying size and preservation, all of which are oriented along a north-south axis. All of the structures were constructed primarily of tapia – a form of rammed earth technology – although a few wall segments are made in part with conical or rectilinear adobes (Hecker and Hecker 1990; Ubbelohde-Doering 1966; see Chapter 6). Of the eight central compounds, six are especially important to this study: the Acropolis (so-named by Ubbelohde-Doering), and Compounds I-V. The

Acropolis is the only elevated structure within Je-1023 as the southern edge of this building rises steadily from the desert floor to a peak approximately 10 meters above ground level. The result is that the Acropolis has a "wedge" shape when viewed from either the east or west (see Chapter 6). All of the other compounds within the center of the site follow the natural, flat topography of the pampa. The Acropolis and Compound I-IV are especially well-preserved and share a replicated interior composed of a large rectangular plaza that fronts a low platform, the summit of which is reached via a ramp. Access from the exterior into the interior of the large north plazas is always made via a direct entry in the center of the north wall. In the case of Compounds I-IV, the summit of the platform has two additional, bi-laterally organized ramps and platforms that face each-other (east to west) in a mirror opposition (see Chapter 6). Further passage beyond the elevated room and into the interior of the compound, however, is discouraged with the placement of a baffled entry in the middle of the south wall. This "restricted" area is made up of a series of long hallways, numerous conjoined rooms of varying size, and in some cases, additional rooms that contain additional examples of conjoined ramps and platforms.

A major focus of this project was to acquire carbon from intact archaeological context within Jatanca for the purpose of effectively dating construction activity, sequences, and occupation. Based upon ten carbon samples acquired from architectural context, the major occupation of the site dates to the Late Formative Period (approximately 400 BCE to 0 – see S. Pozorski and T. Pozorski 1987 - Table 3 pgs. 108-109), but fineware ceramics associated with the Middle Formative Period (see Chapter 4) along with dates acquired specifically from the Acropolis (see Chapter 5 and 6), indicate that there was a late Middle Formative Period occupation of an undetermined size within Jatanca as well (Table #1.1). Therefore, the bulk of the occupation, at Je-1023 appears to date within a range of approximately 500BC to AD100. Architecturally, the sequence of construction begins with the Acropolis, which appears to be the oldest building within the core by some 200-300 years, followed by the construction and occupation of Compounds I-V (see Chapters 5 and 6). Once abandoned (by no later than approximately AD200 – see Chapters 4, 5 and 6), carbon dates and ceramic data indicate that the site was evidently not permanently reoccupied by later groups such as the Moche, Lambayeque, Chimú, or Inca. Additional radiocarbon dates acquired by Proyecto Jequetepeque (Dillehay and Kolata 2004 – see Chapter 5) fall within this same approximate time span and substantiate dates acquired by this project.

Table 1.1 - List of Carbon Dates from Jatanca (Conventional Radiocarbon Age)

Sample Number	Unit Number	Context	Date BP
AA69637	Acropolis LP-2	Floor #2	2470±39
AA69636	Acropolis LP-3	Hearth sample	2423±42
AA69630	Compound I/Unit 1	South Tapia Wall	2163±49
AA69631	Compound I/Unit 1	Interior Floor #3	2114±33
AA69629	Compound I/Unit 3	Interior Floor #1	2062±44
AA69632	Compound II/Unit 1	Interior Floor #1	2063±33
AA69633	Compound II/Unit 2	Interior Floor #3	2219±53
Beta-216931	Compound III/Unit 1	Interior Floor #1	2030±40
AA69634	Compound III/Unit 1	Interior Floor #3	2156±37
AA69635	Compound IV/Unit 2	Interior Floor #1	2092±37

The complex, generally well-preserved architecture, relatively pristine setting free of modern development, and understudied nature of Je-1023 made it an attractive location for dissertation work. The architectural core of the site and its relationship to the surrounding countryside served as the main source of data used to investigate the below issues listed below. To a degree, reliance upon architectural and spatial data as a primary avenue of investigation was necessitated by the disturbed context of surface remains caused by barchan dune activity (see Chapters 2, 3, and 4), and the general lack of artifacts and features encountered within excavation units (see Chapter 5). Theoretically, this project relied upon a wide-variety of perspectives generated from different areas of interest such as proxemics (Hall 1959, 1966; Higuchi 1983; Moore 1996; Tuan 1974), performance theory (Coben and Inomata 2004), the relationship between architecture and behavior (Dillehay 2004; Rapoport 1969, 1982), and collective social memory (Alcock 2002; Bevan 2007; Connerton 1989; Halbwachs 1992; Van Dyke and Alcock 2003). The intellectual goals of this project changed over time and were expanded to include a number of diverse, yet interrelated topics. In short, the following chapters attempt to:

1. Examine the relationship between Jatanca and its surrounding environment – especially with regard to the intricate canal system that both surrounds and runs through the architectural core of the site (see Chapter 3).
2. Better understand the relationship of Formative Period ceramics within the Jequetepeque Valley to those from other valleys – especially the Virú Valley (Chapter 4).
3. Examine the chronological development of Jatanca's architectural core through both AMS dates and stylistic considerations (see Chapters 5 and 6).
4. Examine the form and function of the compounds with regard to identifying specific activities that might have occurred within their interior (see Chapters 6 and 7).
5. Recognize access patterns within the compounds and discuss their significance in terms of differential access and sociopolitical organization (see Chapters 6, 7 and 8).
6. Identify any recurring spatial/architectural patterns that could be used to elucidate social, political and ritual organization within Jatanca (see Chapter 6, 7, 8, and 9).
7. Examine architectural and spatial patterns so as to establish visual and aural parameters of ritual activity (see Chapter 7).
8. Use the chronology and architectural information above to examine the process of North Coast urban development in general, and to identify any relationships

or architectural influences between Jatanca and any later sites such as Pacatnamú and Chan Chan (see Chapter 9).

With the exception of few dissertations (i.e. Elera 1997; Fogel 1993, etc.…) and a handful of journal articles (Elera and Pinilla 1990) little has been published of late that focuses specifically upon the Formative Period within the North Coast region of Peru, let alone the Jequetepeque Valley. Recently, however, a book of edited articles that focus primarily upon the Gallinazo has been published (Millaire 2009). Most of the articles within this book are written by Moche experts that are interested in examining the Gallinazo in an attempt to learn more about the Moche, as opposed to focusing specifically upon Formative Period cultures and the issues that surround these groups which were so critical to later North Coast cultural developments. Indeed, it would seem as though the Later Moche, with their fineware ceramics and elaborate burials, and the Chimú, masters of coastal statecraft, have received far more attention and subsequent publication amongst Andeanists than have the earlier Cupisnique, Salinar, or the Gallinazo (Bawden 1996; Donnan 1976; Donnan and Cock 1986, 1997; Moseley 1990; Moseley and Day 1982; Pillsbury 2003; Shimada 1995). Therefore, in part, this dissertation represents an attempt to explicate the Late Formative Period littoral inhabitants' proto urban aggregation, environmental interaction, architectural organization, ritual activity, and sociopolitical organization during this understudied period of time, primarily from an architectural data base. What follows is a brief outline of, and introduction to, chapters two through ten.

Introduction to Chapters

This dissertation has been broken down into ten-chapters. In general, the entire body of work has been organized to first present relevant background information (environment and culture history), followed by the data (ceramic collection, excavation, mapping), and concludes with the actual analysis using a number of methods and theoretical perspectives from both within and outside the discipline of anthropology. Briefly, the chapters and their content are as follows:

Chapter Two provides the reader with critical background information in three specific areas: the literature related to the development and identification of urban sites on the North Coast; the local environmental conditions of the Pampa Mojucape – especially those that have an impact on the local taphonomy; and a review of Formative Period sites that antedate, are contemporary to, and post-date the occupation at Jatanca.

The initial literature review reveals that archaeological scholars have used many criteria by which to label a site as "urban." These criteria include settlement patterns, monumental architecture, sociopolitical centralization, centralized economic storage, the ability to marshal large work groups for public construction, control over long distance trade and exchange, presence of craft specialization, and population thresholds with the result being that while there is some overlap, ultimately, no two scholars agree on what criteria minimally constitute the identification of an urban site. Yet this is of little concern to this work, as ultimately determining whether Jatanca is an "urban" or "non-urban" site is not a major issue. Indeed, as will be demonstrated, Jatanca does not fit anyone's criteria or definition of urban. Instead, a major theme of this work is to examine the role that Jatanca and other Formative Period compound-style sites played in the development of much later monumental urban architectural forms along the North Coast, and to investigate the mechanism by which this development may have occurred. As is argued in Chapter 9, the manipulation of social memory via "strategies of forgetting" and "acts of remembering" as embodied in architectural mimesis was used to establish ties to the past (either real or fictitious), and may have played an important role in the re-birth of compound-style architecture within the undeniably urban setting at the Late Intermediate Period (AD 800 to AD 1450 – see Lockard 2009) Chimú site of Chan Chan, along with its satellite administrative compounds located within other North Coast valleys.

This chapter also examines the unique environment of the coastal Andes and the interplay between the mountains, ocean, and desert ecozones (Barker and Gilbertson 2000; Dillehay et al. 2004; Kosok 1965; Murra 1980). This section will demonstrate that understanding the taphonomy of the local environment, and its long-term impact on the constructed world and lives of the residents at Jatanca, is critical if one is to understand the site's settlement pattern, chronological development, and architectural organization (see Dillehay 2001; Dillehay and Kolata 2004; Dillehay et al. 2004, 2009; Kosok 1965; Moseley 1975).

Lastly, this chapter describes the settlement patterns and monumental architecture of some of the key North Coast Formative Period sites that antedate, are contemporary with, and post-date Jatanca in their occupation (Alva 1986; Bennett 1950; Dillehay et al. 2009; Elera 1997; Onuki 1994; Tellenbach 1986; Willey 1953). The primary goal of this section is to examine some of the long-term similarities and changes in monumental architecture that occurred during the Formative Period. This will give the reader an idea as to which architectural features were somewhat "static" in their development, and which were more "dynamic." For example, the incorporation of private plazas into monumental architecture was amplified greatly over time, and was a feature consistently associated with monumental architecture (see Moore 1996). Identifying and explicating these continuities and changes over time is necessary as subsequent chapters examine the impact that ritual, politics, social memory, and agency had upon architectural design – especially with regards to North Coast monumental (or public) architecture.

Chapter Three examines the settlement pattern of the major sites within the Pampa Mojucape, changes in irrigation infrastructure, and the resulting "horizontal stratigraphy" of the Pampa Mojucape. There are three major sites located within the study area – Jatanca, Huaca Colorada, and Tecapa. Jatanca is made up of two major settlement zones: the architectural core (made up of the free-standing compounds) and the domestic scatter which surrounds the core in a concentric circle. The latter zone indicates that a large attendant population concerned primarily with agricultural activity was associated with the site. Huaca Colorada was a major Moche site within the southern valley and is situated two kilometers to the north of Jatanca on the summit of what appears to be a sandy slope that rises some 15 meters above the surrounding pampa (Swenson et al 2010). Immediately adjacent to Huaca Colorada is the site of Tecapa, which was originally a Chimú administrative center that perhaps continued to be used during the Late Horizon (Dillehay et al. 2000, 2009; Hecker and Hecker 1990; Donnan 1997; Ubbelohde-Doering 1966). All three of these sites (but especially Jatanca) are examined so as to determine how their constituent populations interacted with the dynamic local environment.

Within this framework, an additional focus of this chapter is the complex canal system that covers much of the pampa and how it was articulated with the three major sites. Water for the canal system associated with Jatanca originated from within the now dry Quebrada Cupisnique (Dillehay – personal communication 2010), while water for later, much larger canals associated with Huaca Colorada and Tecapa was likely brought in from the Jequetepeque River – some 20 kilometers from the pampa (Dillehay et al. 2009; Eling 1986, 1987). An examination of the spatial distribution of these features indicates that by the Late Intermediate Period the canals likely formed an integrated whole that was designed with redundant components so that water could be brought on and off-line in response the cyclical encroachment of barchan dunes and destruction caused by ENSO events (Dillehay and Kolata 2004; Dillehay et al. 2004, 2009; see also Eling 1986, 1987).

In addition to the above agriculturally-oriented features, the Pampa Mojucape also has a few short lengths of poorly-preserved prehistoric roads along with numerous wall segments that run primarily in an east-west direction. While the chronology and function of these walls is somewhat unclear, construction material data indicate that they were not in place while Jatanca was occupied and that they were more likely associated with later occupations at Huaca Colorada and Tecapa.

The relationship between Jatanca and other Formative Period sites (Dillehay et al 2009) within the Jequetepeque Valley is also examined within this chapter. While it is difficult to know the exact sociopolitical and economic relationship between Jatanca and its neighbors without further radiocarbon data that could better-establish a contemporary relationship (see problems with domestic ceramics in Chapter 4), this chapter does, however, note that many of these sites are located within areas that could have been of historical importance to Jatanca, such as the middle valley. Indeed, as has been demonstrated in other North Coast valleys, the small agriculturally-oriented villages of the middle valley sites may have provided much of the initial rapid population increase associated with emerging littoral farming groups (Attarian 2003, 2009; Moseley 1975). In addition, many Formative Period sites within the Jequetepeque Valley (Dillehay et al. 2009) are located within areas that had nearby access to raw materials that would have been of economic benefit to a predominantly farming population located at Jatanca. Some of these resources include reeds for *quincha* construction and marine resources for consumption. Therefore, it seems likely that Jatanca may have had an as yet unclear relationship with additional contemporary sites throughout the valley.

Finally, the geophysical location of Jatanca and its subsequent abandonment is also discussed at length. It seems likely that if the Quebrada Cupisnique went dry during the occupation of Jatanca, this would have provided a strong impetus to abandon the Pampa Mojucape – especially as the recently-dried river bed would have allowed for greater barchan dune activity within the area (Dillehay – personal communication 2010).

Chapter Four examines the massive ceramic scatter associated with Je-1023, which represents one of the most-dense collections of surface ceramics – Formative Period or otherwise – within the Jequetepeque Valley (see Dillehay et al. 1998, 1999, 2000, 2009; Eling 1987; Hecker and Hecker 1990). In many especially deflated sectors of the site, several continuous layers of ceramics are superimposed directly upon each other resulting in a lens that can be as thick as 5 cm. The main thrust of this chapter is the chronological comparison (based primarily upon differences in ceramic surface treatment) between the ceramics at Je-1023 with those from the Virú Valley (Bennett 1938, 1950; Collier 1955; Donnan 2009; Ford and Willey 1949; Millaire 2009; Strong and

Evans 1952). The result of this demonstrates that despite some stylistic differences, the ceramics from Jatanca are remarkably similar to those from the Virú valley, further indicating that Je-1023 was occupied during the Late Formative Period and abandoned before subsequent ceramic developments associated with the Moche, Lambayeque, and Chimú. Perhaps the most interesting outcome of this inter-valley ceramic comparison is that data from Jatanca might support the idea proposed by Jean-Francoise Millaire (2009) and Chris Donnan (2009), that there was very little difference between the domestic ceramics within the various North Coast valleys during the Formative Period due to the presence of a widely shared inter-valley culture, or "ethnic substrate" (referred to as *Norcosteño*), and that the use of domestic ceramics in the identification of time/space specific culture groups such as the Salinar, Gallinazo, and Moche has led to numerous time/space problems for North Coast archaeologists. Conversely, Formative Period elite wares were representative of, and used primarily by, a site's "polity leader" as a means of social differentiation. Therefore, these types are more amenable to change and can show significant differences in time/space and cultural affiliation (Donnan 2009; Millaire 2009). In fact, as demonstrated in Chapter 4, double spouted vessels with a bridge handle and decorated with negative resist techniques may have been among the so-called "elite wares" used by "polity leaders" within Je-1023 during the latter portion of occupation as a means of corporate identification.

This chapter also provides a brief overview of the ceramic types that are associated with Jatanca via the analysis of both an informal and formal collection. The informal collection is made up of ceramics that were opportunistically collected, generally due to the presence of some "unique" quality such as surface treatment or rim form. The formal collection, on the other hand, was made within two areas of the site; a large plaza and a portion of the concentric domestic zone. While these resulting samples were admittedly small, some baseline data associated with surface treatment and form were distilled via basic analysis such as cross tabulation of traits and simple frequency analysis. Unfortunately, a more detailed statistical analysis of the Jatanca surface ceramics must wait until a larger data base has been acquired.[3]

Chapter 5 presents the results of the excavations within the compounds of Jatanca and two of the canals that are associated with the site. This chapter illuminates issues related to chronology (absolute and relative), room/compound function, and issues of site abandonment and reoccupation. As stated above, a major goal of the excavation was the recovery of archaeologically intact deposits of carbon for subsequent radiocarbon dating. These dates enabled this chapter (and subsequent chapters) to examine issues such as:

The chronological parameters of site occupation

The internal construction sequence of the compounds

The temporal relationships of the compounds to each other

The association of the irrigation canals with the core, and whether they were used contemporaneously with the compounds

The possibility of reoccupation episodes by later cultures such as the Moche and Chimú.

In order to address the above issues, excavation units were distributed throughout all sectors of the compound architecture – especially within areas that had relatively low amounts of sandy overburden (<1 meter) so as to facilitate excavation. Typically, excavation resulted in the recovery of few features or artifacts, as floors appear to have been kept relatively clean, which made the analysis of individual room function difficult, if not impossible. There were a few noteworthy exceptions to this general pattern, however, as evidence of a domestic occupation, a possible temporary “transfer midden,” and a whole ceramic vessel were recovered from the interior of compound I. In addition, a single posthole and evidence of small fires built on directly floors were found within Compound II. However, for the most part, excavation units revealed the

[3] A large-scale surface collection within the architectural core and the concentric domestic zone is scheduled for the 2010 field season.

presence of extremely hard, undifferentiated floor surfaces. In an effort to examine floor construction sequences, a small 50cm X 50cm test was placed within each unit and excavated down to sterile soil. These sub-units generally revealed the presence of multiple, directly bonded floors that contained little in the way of ceramic or macro-ethnobotanical debris. Fortunately, most of them contained copious amounts of carbon that could be collected for potential radiocarbon dating. Some floors showed evidence of repair work in the form of small patches – especially those associated with the plaza/ramp/platform complex, but in general encountering features such as these was unusual. Ultimately, excavation failed to reveal any physical evidence of post abandonment reoccupation by later groups such as the Moche, Chimú, or Inca, further confirming the results of the ceramic analysis and the radiocarbon data.

Matrix samples were taken from each floor and were floated in an effort to remove botanical and faunal material. Samples were then analyzed by ethnobotanical experts in Trujillo and the final report of this activity was returned to this project in the spring of 2006 (Vasquez and Tham 2006). Numerous patterns were identified in the data and were a tremendous aid in reconstructing both the ecosystem of the Pampa Mojucape during the Late Formative Period, as well as some aspects of construction chronology.

A major concern of this chapter is to present the results of radiocarbon dating. Dates indicate that the Acropolis was likely the first structure built and occupied within the site, sometime around 500 BC. Compounds I-IV appear to have been built approximately 200 years later at about the same time and were occupied contemporaneously, with ultimate site-wide abandonment occurring approximately AD 100. These dates reinforce construction and occupation chronologies developed in other chapters as well as from the ethnobotanical data.

Finally, two of the canals adjacent to Jatanca's compounds were also excavated in an effort to recover carbon, identify canal use/cleaning episodes, and establish a temporal relationship to the standing architecture. Radiocarbon dates indicate that some canals were in use while Jatanca was occupied and were not cleaned out and brought back into use by subsequent groups after their abandonment.

Chapter 6 examines the spatial and organizational configuration of the compounds that make up Je-1023's architectural core. Chronology is once again addressed, this time using wall abutments and alignments that resulted in the creation of large-scale, attached, multi-roomed rectilinear forms. These forms are then analyzed so as to identify the presence of concentrated, or "punctuated," building episodes, and to better understand intra- and inter-compound construction sequences. For example, Compounds I-IV and the Acropolis are all made up of a Central Linear Core (CLC), while compounds I, II and IV also have a large, attached western annex. It is argued that the annexes may be a slightly later addition to the CLC, and may indicate the presence of changes in the socioeconomic and/or political role played by the compounds.

Compound access patterns, however, are the main focus of this chapter. Both *beta* and *gamma* analysis, which examine inter-room linkage patterns, indicate that the compound interiors were relatively restricted areas. The use of increasingly narrow and baffled entries between rooms along with winding, dead-end corridors furthers the likelihood that casual interior compound access for many of Jatanca's constituents was discouraged. In fact, it is argued that in addition to hosting political and ritual activity, one of the functions of the compounds was to provide housing for a small population of emerging societal "elite" who were kept somewhat separated from those who resided within the concentric domestic zone (see also Chapter 8).

The presence of a series of nested architectural complexes that diminish in size as one proceeds further into the compound is among the most important architectural patterns discovered during mapping. There is some variation in the size and configuration of these complexes, but for the most part they share many organizational features such as a large north plaza, an elevated room located to the south of the plaza, and the additional presence of ramp/platform features within the elevated room. Within the Acropolis and Compounds I-IV, there are large multipurpose coplexes composed of a plaza, ramps and platforms located within the northern entry of each structure. This replicated combination of plaza, ramps and platforms located in the northern edge of each compound will be hereafter referred to as the Primary PRPC (Plaza/Ramp/Platform Complex). Within this complex, the northern room is a large open plaza, while the elevated southern room contains the ramp/platform features. In Compounds I-IV, the ramp/platform features were set in mirror opposition, while in the Acropolis, the two ramp/platform features were organized in a slight variation on this general theme. Compounds III and IV have exact replicas of this complex (Secondary PRPCs) located deeper within the interior of the compounds.

Visually, there is a strong central north-south axis within these complexes created by the placement of a single door within the center of the north wall, a central ramp that connects the plaza to the ramp/platform room, and a central door located within the southern wall of the elevated ramp/platform room. The presence of this axis, along with the east-west axis created by the northern edge of the elevated ramp/platform room is critical to understanding both how this complex functioned during social, political, and ritual activity (Chapter 7), along with the broader sociopolitical organization of the site (Chapter 8; see also below). In addition, the patterns of restricted compound access at Je-1023 might support Moore's (1996) contention that an "ideology of separation" between sociopolitical classes has considerable time-depth along the North Coast of Peru. In other words, compound architecture might indicate the presence of at least two (if not more) sociopolitical groups: those who had free access into compound interiors and those who did not.

Architectural analysis also demonstrates that in some regards, access patterns at Jatanca are similar to those found within compound architecture at Pacatnamú, a large multi-component (Early Intermediate Period through Late Intermediate Period) site within the Jequetepeque Valley – despite the fact that the primary occupation at the two sites was separated by hundreds of years. At both sites, it appears as though right-hand routes into the compound interior are "favored" over left-hand routes (Donnan and Cock 1986; Moore 1996). At Pacatnamú, right-hand paths tend to lead past ostentatious displays and into ritual areas, while left-hand routes lead to areas of domestic activity (but see also Moore 1996). At Jatanca, right-hand routes tend to lead into the interior of the compound and into additional PRPC areas, while left-hand routes tend to lead into rooms, or a series of connected rooms that eventually dead-end. What is especially important is that this right-hand privileging may lend additional support to the contentions of chapter 9 that urban forms associated with the Chimú were partially the result of a combination of social memory and human agency which led to revitalization in the use of compound-style architecture along the North Coast during a time of social upheaval.

Utilizing data (i.e. ceramic, architectural, etc.…) and themes (i.e. restricted compound access, nested pattern of PRPCs, etc.…) discussed in previous chapters, **Chapter 7** begins by examining some of the possible ways that the compounds could have been used by Jatanca's constituents such as the production and storage of goods, or for domestic occupation. While evidence of some limited domestic occupation is discussed, along with the possible use of the compounds for the storage of comestibles, architectural data would indicate that the compounds were also used for group activities such as those associated with political and ritual spheres of life – especially within the Primary and Secondary PRPCs. In fact, as evidenced by the amount of compound space devoted to the PRPC, perhaps one of the most important compound functions was to provide space for a wide variety of group activities on a variety of scales. For example, the large Primary PRPCs located in the north of the compound hosted large events, while more interiorly located Secondary PRPCs hosted smaller events.

Regardless of the size, it is of interest to note that many of the constituent parts of the PRPC are somewhat analogous to that of a theater: the plaza is the equivalent of the "seating" area; the ramp/platform room acts as a "stage;" and the ramp/platform features constitute "furniture" used in staging a "performance." Also as with a theater, separate entries are provided for both the "actors" on the stage and the "audience" in the seating area, allowing the two groups to remain separated until the time at which the "performance" begins. Based in part upon proxemic theory generated by Hall

(1959, 1969, 1976; see also Moore 1996), performance theory (see Coben and Inomata 2006), and artifacts recovered from sites such as Pacatnamú (Donnan and Cock 1986) and Chan Chan (Uceda 1999) it is argued that the large PRPCs located in the northernmost portion of the compounds were, on occasion, the loci of large-scale, perhaps highly stylized political and ritual events that used elaborate staging and other media such as music and/or dance as an aid in symbolic transfer between parties stationed within both the plaza and the ramp/platform room. Group events held within the smaller plaza/ramp/platform areas located deeper within the compounds probably took on a different form due to the more "intimate" nature of the space. Within these areas, more subtle communicative devices such as facial expressions and speaking voices could have been used in symbolic transfer (Hall 1959, 1969; Moore 1996a, 1996b, 2006). Ultimately, these areas provided a sanctioned space within which the various social segments that made up the constituency of Jatanca could come together and reaffirm a collective social identity. At the same time, and perhaps somewhat paradoxically, political and ritual activities held within the PRPC reified differential social status via the highly-visible spatial segregation of those within the plaza, from those within the ramp/platform room (see below; Chapter 8).

The focus of **Chapter 8** is the sociopolitical organization of Jatanca at a multiplicity of levels ranging from site-specific to the North Coast region. Settlement patterns are once again examined along with Jatanca's compound architecture, in terms of both construction methods and the resulting spatial layout. With regard to construction techniques, segmented tapia construction is examined in light of data from other sites that also relied upon similar techniques for the production of monumental architecture such as Huaca del Sol (Moseley 1975) and Chan Chan (Moseley 1982). While some might regard the presence of segmented construction techniques in and of themselves as evidence of hierarchically organized corporate labor such as that first identified at Huaca del Sol (Hastings and Moseley 1975; Moseley 1975), this chapter argues that the lack of any kind of indicator such as "Makers' Marks" that could be used to signify the fulfillment of a labor obligation, undermines this position (Bawden 1996). Instead, it is argued that the term “community labor” is perhaps a better description of how labor was organized for the completion of large-scale tasks associated with monumental construction.

A detailed examination of the Primary and secondary PRPCs may provide additional insight into the sociopolitical organization of the site and indicate the presence of dualistic social organization. Duality is an apparently ancient belief in the presence of opposing but complimentary forces that must be continually mediated so as to create a harmonious balance between the two (Bawden 1996; see also Netherly and Dillehay 1986; Moore 1996). It is argued that the internal layout of the PRPCs (Chapter 6) provided a place where political and ritual activities instrumental in maintaining and reaffirming duality-based sociopolitical organization could be conducted. Indeed, the north-south axis of the room divides the complex into two relatively equal halves, each with a single ramp/platform feature. When examined in this way, each half of the PRPC could represent the physical domain of opposing, closely related kin-based social groups that make up the social whole of each compound.

However, within this hypothesized kin-based form of sociopolitical organization, there may have been an emerging trend toward hierarchical organization as well (see Bawden 1996), which is also indicated within the architectural configurations of Jatanca’s compounds. Once again, restricted access patterns and nested PRPCs are used to argue that there are at least two different social classes present at the site: those who lived within the walled compounds and those who lived within the surrounding concentric zone filled with domestic debris. These divisions may be further reflected (and reified by) the nested pattern of PRPC access within the compounds. Compounds I-IV are all characterized by the presence of at least two (and in some cases three) sequentially smaller areas suitable for group political and ritual activity. This same pattern of diminishing replicated space is found at many other early sites both on the coast (i.e. Aspero – see Feldman 1985, 1989; Huaca de los Reyes – see Pozorski 1985) and within middle valley locations (i.e. Monte Grande – see Tellenbach 1986; Kuntar Wasi – Onuki 1994). Both Pozorski (1985) and Feldman (1989) argue that this pattern indicates the presence of a social hierarchy that permitted or sanctified the passage of decreasing numbers of people into the increasingly smaller ritual areas. It seems likely that a similar situation has been identified at Jatanca as well.

Finally, Bawden (1996) argues that a major reason for the collapse of the Moche polities during the Early Intermediate Period (0-700BC) was due to an inherent contradiction in Moche social organization, which led to insurmountable social tension; i.e. the development of rigid political hierarchies within a fundamental matrix of extended kin-based relations could not be internalized individually, or within the group. While the validity of Bawden's (1996) argument can certainly be contested, the architectural form of the PRPCs could be interpreted as a sacred and secular setting, where these incipient, but perhaps widening social tensions were physically symbolized, and could perhaps be addressed by the group. For example, divided along the north-south axis, the complex can be viewed as two relatively equal parts of a whole. When divided along the east-west axis, however, the two halves are unequal; the southern room is smaller, elevated above the plaza, contains ritually important ramp/platform features, and is the gateway into the restricted interior of the compound. In this sense, the complex may have also reflected and reified the presence of sociopolitical disparity in terms of access to power as well. Physically then, this room embodies the inherent social conflict presented by emerging sociopolitical hierarchies - on the one hand the room represents sociopolitical equality, and on the other the same room represents an emerging sociopolitical dichotomy.

Chapter 9 is concerned with the examination of monumental urban architectural development along the North Coast, and how it could have been purposefully manipulated in order to create ties with the past and redefine sociopolitical order. Invoking the ideas and theories of Connerton (1989), it is argued that at least some of the architectural forms used by the Chimú in compound construction at sites that range from urban Chan Chan to rural administrative centers such as Quebrada del Oso may have been purposefully revived in order to manipulate collective social memories by an emerging elite segment of Chimor society. In this scenario, intentional "acts of remembering" and "strategies of forgetting" were employed in the design of monumental architecture so as to simultaneously renounce the immediate past while also establishing ties (perhaps fictive) to a more distant past in order to create a sense of long-term order, timelessness, and/or "naturalness" to emerging social relations during the turbulent transition between the Middle Horizon and the Late Intermediate Period (Bevan 2006; Hobsbawm and Ranger 1983).

The above contention stands in contrast to prior developmental theories that attempted to explain the architectural origin of the Chimú *ciudadelas* at Chan Chan via diffusion-based approaches that utilized more contemporary architectural forms as the primary inspiration. For example, there are two major traditional points of view related to the origin of Chimú compounds:

1) Many aspects of the *ciudadelas* at Chan Chan are the result of a highland influences from the Huari culture (McEwan 1990, 2005).
2) The origin of Chan Chan's *ciudadelas* is largely a local development, with the nearby Moche site of Galindo having played a major role in inspiring subsequent compound revitalization (Bawden 1982, 1996, 2001).

In both models, relatively contemporary cultures (the Huari and the Moche) provided the primary architectural influence in Chan Chan's architectural development. This chapter argues, however, that these groups were of less importance than the combined influence of human agency and social memory, and that the iconic form of the *ciudadela* represents an attempt to create a tradition linking incipient leaders at the Chimor capital with a mythical past as embodied in long-abandoned Formative Period compounds, thereby establishing a sense of architectural continuity (and by extension cultural continuity as well) that could be extended into the sociopolitical realm and exploited. Finally, it is also speculated that perhaps Jatanca ultimately became an important part of the "curated landscape," or a physical point where memories of the past could be invoked and actively “remembered” among the Chimú – perhaps as a means of mediating relations (social, political, ancestral, etc.…) within the then-present.

Chapter 10 is the final chapter of this work and will offer a brief recap and integration of the major themes from chapters two through nine. Finally, this chapter concludes with suggestions for future work related to studying urban architectural development along the North Coast of Peru, especially from within a framework of social memory and agency.

The breadth of study encompassed by this dissertation is quite large and ranges from the development of social hierarchies, ritual activity, sociopolitical organization, and the influence of human agents actively manipulating social memory via monumental architecture in order to establish expedient links with the past. Ultimately, it is hoped that this work will aid in elucidating an understudied chronological segment of Peruvian North Coast Prehistory, the Late Formative Period.

Chapter Two: Theoretical, Environmental, and Cultural Background

Introduction:

As discussed in Chapter 1, this dissertation has two overarching goals: 1) examine the development of incipient urbanism along the North Coast of Peru from the perspective of the Late Formative Period site, Jatanca; and 2) identify and examine the sociopolitical, cultural, and economic relationships between Jatanca and other contemporaneous Late Formative Period sites such as the Gallinazo Group located within the northern portion of the Virú Valley, Cerro Arena which is located in the southern Moche Valley, and earlier Middle-Jequetepeque Valley sites such as Monte Grande (Tellenbach 1986). Examining these two general threads of cultural development will result in a much-improved understanding of the understudied Late Formative Period and the beginnings of urbanism within this particular setting. In order to examine these themes, however, some background knowledge of the North Coast area must be discussed.

This chapter has three broad, yet interrelated goals. The **first goal** is to examine the intellectual development of the concept of urbanism – especially as it has been applied among Andeanists within the North Coast region of Peru. Urbanism has, at times, been a point of contention among Andean scholars with debates periodically focused upon issues such as the definition, origination, process, and spread of this sociopolitical and economic development. Much of this work has been based upon the analysis of settlement patterns and architecture. Therefore, this section will focus primarily upon how settlement patterns and architecture have been employed within a variety of conceptual frameworks as a means of examining the development of North Coast urbanism. Ultimately, many of the ideas, hypotheses, and theories expressed by these scholars, both broad and specific, can be tested against similar data gathered from Jatanca (Je-1023).

The **second goal** is to provide the reader with a basic understanding of the physical Andean environment. The various ecozones that make up this part of the world are tightly intertwined and continue to play an important role in the development of coastal and highland societies today, just as they did during Peru's long and complicated prehistory. In fact, many scholars would argue that the key to understanding the multiplicity of Andean life-ways is through an examination of the interface that exists between a given population and their surrounding environment (Moseley 1975, 1992; Oliver 2003; Rapoport 1982, 1990; Reader 1988).

The **third goal** is to describe the cultural, and by extension, architectural and spatial developments from a few key sites that developed within the Jequetepeque Valley and along the broader North Coast. Emphasis in this section is placed upon settlement patterns and architecture – both vernacular and monumental. By combining environmental information, along with antecedent and contemporary cultural developments, we can examine and understand the forces that helped shape the development of Jatanca during the Late Formative Period.

Urban Development, Theoretical Perspectives, and the Andean North Coast

The study of urban development has been an area of interest for a wide cross-section of academicians who have adopted a variety of theoretical perspectives regarding the underlying processes and resulting conditions of urban life. Scholars from diverse disciplines such as geography (Kosok 1965; Tuan 1974, 1977), architecture (Conklin 1990a; Rapoport 1969, 1982, 1990), history (Connerton 1989; Mumford 1961; Quigley 1979; Toynbee 1934), and anthropology (Adams 1956; Steward 1967; White 1943, 1947) have examined the creation of, and nature of the urban environment, making the phenomena of urbanism a well-studied topic. Archaeologists working in both the Old (Childe 1950; Wheatley 1971) and New World (Hirth 2000; Isbell 1977; Millon 1973; Morris 1972; Moseley and Day 1982; Rowe 1963; Sanders and Price 1968; Sanders, Pasrsons, and Santley 1977; Schaedel 1968, 1972; Shimada 1994) have also studied the phenomenon of urbanism in great detail.

Early archaeological attempts at defining urbanism were somewhat misguided as this concept tended to be conflated with the additional presence of the "state" and abstract notions such as "civilization" (Childe 1950). It could be argued that for scholars such as Childe (1950), who focused much of his work within Mesopotamian sites, there was a tacit assumption that "urban" sites were by default "states," and by definition were "civilized" as well. Defining the presence/absence of urbanism, states, and civilization for a given polity was generally done so via the development and application of trait lists. For example, the presence of things such as monumental architecture and writing, along with non-material things such as centralized rule and markets could be used to at least partially indicate the presence of urban conditions, and by extension, the state and civilization. A classic example of the trait-list approach is Childe's criteria for the identification of urbanism, which was made up of ten key categories. Briefly, according to Childe (1950) the first urban cities:

1. Were more densely settled than prior settlements within the same region
2. Supported craft specialists not directly engaged in agricultural production
3. Had a system of taxation or tithing
4. Were at least partially made up of monumental architecture
5. Had a non-working class supported by surplus agriculture
6. Developed a system of recording economic transactions (writing)
7. Had a well-developed system of mathematics and associated calendar
8. Developed a sense of "sophisticated" artistic expression
9. Participated in long-distance trade
10. A sense of political belonging based upon residence and not kinship

Unfortunately, the degree to which the trait list approach was ever an effective means of identifying complex concepts such as prehistoric urbanism is debatable. For example, these lists (especially that compiled by Childe 1950) are in no small part a reflection of 20th Century urban conditions that were founded upon the presence of industrialism and the market economies of the time. Therefore, the degree to which 20th century urban criteria could be applied to prehistoric polities of a nonindustrialized, non-market nature was certainly debatable. The trait list approach is also anything but impartial as Childe's own Marxist leanings are underscored within his own list, as is obvious by his focus upon the presence of a societal surplus, its control, and the ends to which the surplus is put by an elite class that did not directly labor in the fields for their food.

Perhaps the biggest problem with the trait list approach of urban identification among New World archaeologists was the general lack of writing among North and South American civilizations – a key, if not necessary development in many Old World urban polities. For example, one of the few New World society that had a well-developed system of written communication were the Maya of Central America – a decidedly non-urban group of people (but see also Chase and Chase 1987; Chase, Chase and Fox 1990). Therefore, somewhat in the spirit of "keeping up with the Jones's," a new set of criteria that was specific to New World cultural developments had to be created for the purpose of defining sites as "urban," or by extension, "non-urban." In Mesoamerica and the Andes, data such as settlement patterns were emphasized when examining issues related to urban development (Chase and Chase 1987; Chase, Chase and Haviland 1990; Hirth 2000; Millon 1973; Shimada 1994; Willey 1953).

Along the coast of Peru, where both architectural preservation and visibility can be outstanding, the reliance upon settlement pattern data in examining long-term culture change and the development of the urban landscape was especially useful (see Dillehay et al. 1998, 1999, 2000, 2009, Shimada 1994; Willey 1953). In 1953, Gordon **Willey** published his seminal volume on settlement patterns within the North Coast valley of Viru and effectively demonstrated the value of a more inclusive, less elite-focused discourse on the architecture. While Willey's work was certainly important, his analysis of architecture did not extend much beyond the establishment of a valley-wide chronology and the definition of form, function, and spatial relationships between architectural types. Willey's work did, however, demonstrate a general long-term trend toward urbanism along the North Coast. An additional trend noted by Willey was the shift in corporate architecture from "sacred" platform mounds to "secular" enclosed compounds near the end of the Early Intermediate Period (EIP), which was credited to Huari invaders (Willey 1953).

Despite the generally excellent quality of the Viru Valley work undertaken by Willey and others such as Bennett (1939, 1959), Collier (1955; 1962), Ford (1949), and Strong and Evans (1953) there were a few methodological shortcomings that bear brief examination. For example, survey tended toward large sites, making it likely that many smaller sites went unrecorded. In addition, in some cases, the project relied heavily upon air photos as opposed to actual ground inspection. Concomitant with the issue of site representation, Willey ignored issues related to the difficulties of small site identification. This is no small issue given the amount of barchan sand dunes located within the Viru valley during the time of Willey's survey. Indeed, the largest free-standing sand dune in the world (Pur Pur – approximately 1km in length from tip to tail) is within only a few kilometers of the Gallinazo group (see also Shimada 1994).

Donald Collier (1962) also documented the trend of urbanism within the Virú Valley, albeit somewhat briefly. Collier (1962) noted that during the height of urban development along the North Coast during the Late Intermediate Period (LIP), Virú lacked a large urban center despite the fact that urban centers flourished during this time within many of the valleys along the North Coast such as Chan Chan in the Moche Valley, Pacatnamú in the Jequetepeque Valley, and Túcume in the La Leche Valley. During the LIP, large urban centers were characterized by what Collier described as "large, imposing, dwelling-palace-temple complexes" that were surrounded by extensive rectangular compounds (Collier 1962).

While the Virú Valley may have lacked a large urban center during the LIP, it did have some "miniature" examples referred to as "urban lay centers" that could be described as "planned settlements that were enclosed within rectangular compounds" (Collier 1962). Unlike the large urban centers located in the valleys to the north of Virú, however, these urban lay centers lacked terraces, mounds, and decorated rooms (Collier 1962). Collier argued that perhaps only two sites within the Virú Valley conformed to these criteria (V-124 and V-269). For Collier, urbanism along most of the

North Coast began with the Middle Horizon and the influence exerted by highland invaders,[1] who broke down the earlier Moche fluorescence resulting in numerous changes in North Coast settlement patterns such as the decline of the pyramid/huaca as the focal point of a site, and an increased emphasis in urban planning and spatial organization (Collier 1962). The production of ceramics became more streamlined as it was during the Middle Horizon that coastal groups began to use molds in the large-scale production of domestic ceramics (Collier 1962).

John Rowe (1963) was also interested in the process of urbanism within the Andes and used a combination of settlement pattern analysis, architectural study, and population figures in an effort to identify examples of urbanism, which resulted in four types of urban site: the synchoritic pueblo, the achoritic pueblo, the synchoritic city and the achoritic city. "Pueblos" were defined as urban sites in which all of the residents engaged directly in the subsistence economy at least part of the time, while "cities" were urban sites in which at least some of the residents were involved in non-subsistence livelihoods, such as craft production, defense, trade and exchange, religious specialization, or administrative bureaucracy (Rowe 1963). In addition, urban sites could be further subdivided based upon their hinterland settlement pattern. Sites that had associated scattered settlements (especially of farmers) were defined as "synchoritic," and urban sites that lacked peripheral settlements of permanent residents were defined as "achoritic" (Rowe 1963). Rowe considered synchoritic settlements to be inherently unstable as there are bound to be conflicts between the needs and desires of the residents of the center and those in the hinterland. Furthermore, problems could also develop between producers and non-producers within an achoritic city. In the case of the synchoritic city, the physical end could be violent with wholesale destruction within the center and/or peripheral sites, whereas achoritic sites tended to be overthrown via internal, political means.

Rowe had a number of general ideas related to the timing and form of North Coast urbanism which will be of great importance to subsequent chapters in this

[1] Collier (1962) associates these invaders with the highland site of Tiwanaku.

dissertation. For example, prior to the Middle Horizon, North Coast urban sites (including ceremonial centers) were relatively small. According to Rowe, the "florescence" of large, secular coastal cities was primarily the result of Highland Huari invaders. In addition, Rowe also argued that the large cities themselves did not develop out of the already existing ceremonial centers, meaning that they were not a general stage in urban development (However, see Schaedel 1972). Finally, he also argued that the cities appeared before their associated irrigation works – an idea that seems somewhat tenuous in light of data from Jatanca (see Chapters 3 and 5). Ultimately, once the form of the secular city was accepted by local North Coast populations, however, it remained a common form until the time of Spanish contact.

The large city was not so advantageous as to have spread consistently throughout time and space.

Lanning (1967), who considered the lifecycle of urban centers to be fleeting, elaborated upon Rowe's earlier work and developed six criteria for urbanism that were somewhat reminiscent of those developed by Childe. In Lanning's scheme, settlement type definition, including urbanism, involves the determination of six categories of information:

1. Population size
2. Population density
3. Fulltime specialists not engaged in agricultural activity
4. Chorism
5. Nucleation (presence/absence of identifiable focus for settlement)
6. Permanence of occupation

Lanning (1967) argued that during the EIP, many of the large-scale features (i.e. irrigation canals, fortresses, etc.…) along with urban centers themselves, were the direct result of population expansion and pressure, or the need to feed, house, and defend large numbers of people.

Richard Schaedel (along with Paul Kosok – see below) was among the first to see utility in conducting macro-valley studies based partially upon the analysis of aerial photographs, as an aid in examining urban development. This approach gave Schaedel a wide-ranging, comparative base from which to formulate his ideas related to urban development. Based upon these data, Schaedel (1968) argued that the village and the town were critical preconditions in the formation of later urban polities. To Schaedel, urban development occurred in an accumulative, stage-like fashion. For example all urban polities initially developed around public architecture (a shrine surrounded by undifferentiated vernacular architecture), with defensive fortifications (i.e. hillside redoubts, or walled areas) eventually added to the mix. Ultimately, urban polities were distinguished by the eventual adaptation of specialized architecture that reflected the development of centralized control associated with the state. This specialized architecture might include structures dedicated to tasks such as water management, settlement access, and ceremonies. Indeed, Schaedel (1966) argued that urbanism itself was coeval with political centralization due to the increased concentration of services provided by an emerging secular state, which ultimately led to the necessity of reorganizing formerly non-urban settlements and architecture into an urban configuration.

An important key in Schaedel's model of North Coast urban development is the hegemonic role played by the Central Highland-based Huari. According to Schaedel (1972), prior to the Huari invasion that marks the beginning of the Middle Horizon, the settlement pattern associated with theocratically organized North Coast urban polities was not particularly complex – reflecting perhaps differences in housing for those of the ruling and artisanal class and areas for military purposes. Politically, these sites attempted to expand their hegemonic influence over smaller neighbors, and when successful, they established a capital or "main ceremonial center" with associated smaller sites to further aid in their hegemonic goals. However, according to Schaedel, the sites established by the conquering polity "had little diversification of function, were poorly equipped to control the people that they dominated, and were not placed with regard to resource control" (Schaedel 1972). With the Huari invasion, however, a new system of hegemony was introduced to the region – one that also emphasized efficient local economic control – as reflected in changes in the settlement pattern within many of the North Coast valleys. For example, Schaedel argues that the development of "integrated buildings" within sites located at coastal valley necks that housed "religio-military-hydraulic" functions are the direct result of Huari invaders. In fact, Huari invaders were responsible for the relatively rapid breakdown of the traditional North Coast sociopolitical trend of urbanism, which was the growing ceremonial center pattern, and provided instead "a truly urban environmental concept for the capital of the regional units" (Schaedel 1972:17).

Paul Kosok (along with Richard Schaedel) conducted one of the first multi-valley studies that examined the role of irrigation in the development of North Coast polities (Kosok 1965). Kosok relied heavily upon settlement pattern data and the timing of monumental architecture construction. In addition to ground-proofing and survey on a major scale, Kosok utilized then-recent aerial photos of the North Coast as an invaluable aid in his work and in developing his ideas about the nature of North Coast urbanism. Like Schaedel, Kosok regarded urban development as having occurred in a fairly unidirectional manner with the first great outburst of coastal culture originating within priest-dominated societies when villages were grouped around a local ceremonial center consisting of a pyramid or a group of pyramids. Subsequent increases in social differentiation and military conflicts, concurrent with economic expansion led to a more secularized society as military specialists "grew in power until they dominated the priesthood[2]" (Kosok 1965:13). The architectural result of this change in social organization was the construction of "large, walled urban centers," which served as the "palaces and ruling centers of the chiefs" (Kosok 1965). The previously centrally located

[2] Kosok's theories of urban development (1965) are very similar to those espoused by Richard Schaedel (1972). This is due in part to the fact that they were good friends who spent considerable amounts of time together in Peru. However, the similarity in theoretical emphasis shared by the two scholars is probably due primarily to the fact that Kosok died before *Life, Land and Water in Ancient Peru* was completed. The job of finishing the volume, in fact, fell to Dick Schaedel who finished the book on the behalf of Kosok's estate with no published credit (personal communication from R. Schaedel 1999).

huacas (the physical manifestation of priestly power) were then relegated to a peripheral location within the site that underscored their reduced importance to the emerging secular society.

Michael Moseley and **Carol Mackey** oversaw what has been to date one of the largest coordinated excavations within the Moche Valley (see Moseley and Day 1982; Moseley and Cordy-Collins 1990). While this project was focused primarily upon Chan Chan, other nearby sites such as Caballo Muerto (T. Pozorski 1982), Huaca del Sol/Luna (T. Topic 1982), and Galindo (Bawden 1982) were also studied, in addition to a few sites located outside of the Moche Valley as well (Keatinge 1982; Keatinge and Conrad 1983; see also below). The vast majority of the project, however, concentrated on the architectural core of Chan Chan, which at first glance with its massive compounds and towering walls, appears to have been an urban site. However, as Moseley (1975) takes pains to clarify, the site may not be all that urban when compared to Old World sites such as those that developed within Mesopotamia. To expand on this, Chan Chan is characterized as having a generally low population density (total population = approximately 30,000) within the architectural core. Residents could be broken down into two primary groups: artisans and those associated with the royal lineages (Moseley 1975, 1978, 1982). Artisans, who made up the bulk of the population, were organized at the level of the household and generally not involved in the broader subsistence economy, as evidenced by the lack of farming or fishing implements found within their dwellings , or “SIAR” (small irregular agglutinated residences - Moseley 1975, 1978; see also T. Topic 1982). The close proximity of these artisans to the compounds might also indicate that the Chimor kings exerted tremendous control over the manufacture and subsequent redistribution of manufactured goods such as textiles and metalwork (Moseley 1975; see also Topic 1982). Furthermore, based upon construction patterns, Moseley (1975; see also Day 1982; Chapter 8 and Chapter 9) argued that the local population was not likely involved in the construction of Chan Chan’s core. Instead, Moseley argues that non-local work groups located in Chan Chan’s hinterland were organized in a system of corvée labor to construct Chan Chan. Furthermore, the goal of construction was not to provide civic facilities such as roads, or urban planning that would benefit the general populace, but instead to benefit the aristocracy and royal dynasty (Moseley 1975, 1978, 1982). For example, Moseley argues that each succeeding Chimor king marshaled corvée labor to build his own *ciudadela*, or "palace," which upon his death became a mausoleum cared for in perpetuity by the deceased king's lineage (Moseley 1975, 1978, 1982, 1990). As for the layout and architectural form of Chan Chan, Moseley (1975, 1982, 1990) argues that, "Most types of structural features found at Chan Chan can be traced back to local antecedents, and the settlement is largely an outgrowth of developments that took place within the Moche Valley" (i.e. Galindo) (1975:225). This is a point with which I disagree, and will be examined in detail in Chapter 9.

Izumi Shimada has also examined the issue of urbanism primarily from the Late Moche site of Pampa Grande, located near the neck of the Lambayeque Valley. Shimada's definition of urbanism (or as he calls it, the "city") combines aspects of many of the above ideas to define urban conditions as, "a large, agglutinated settlement that integrates a highly differentiated resident population of over ten thousand, occupies the upper echelon of a regional settlement hierarchy, and offers a range of services and functions unavailable at any single settlement in the lower levels of the hierarchy" (Shimada 1994:136). Theoretically, Shimada is especially sympathetic to Schaedel's overall developmental scheme in terms of the necessary transition between secular and sacred functions within a site, but would argue that North Coast urbanism (especially at Pampa Grande) was a relatively autonomous phenomenon and had little, if anything, to do with Highland invaders.

Christopher Attarian has examined the site of Mocollope, located within the northern portion of the Chicama Valley, and identified a series of changes that lead ultimately to urban conditions during a period spanning the terminal Formative Period through the beginning of the Early Intermediate Period, or about 200BC through AD 10 (Attarian 2003, 2009). Initially (about 200BC), pre-urban, terminal Formative Period sites (PRACh93, PRACh-112, PRACh-114, and PRACh-115) were generally located within sheltered areas of the lower upper valley within defensible locations – a situation similar to other valleys (Santa, Moche, Virú) during the same approximate period of time (Attarian 2009; see also Billman 1996; Millaire 2009; Willey 1953; Wilson 1988). That site defense was a major consideration in geophysical location is substantiated by the presence of tapia walls that ringed the down-slope portion of many of the villages (Attarian 2009). The identification of these sites as Gallinazo (or at the very least pre-Moche) in occupation is evidenced by the lack of Moche ceramics within the assemblage, and the presence of Formative Period types such as Salinar red on white, Castillo Incised, and Castillo Modeled (Attarian 2003, 2009; see also Chapter 4). According to Attarian (2009), these sites were independent farming communities that were concerned primarily with both village and canal defense. The identification of the aggressor has, to date, not been possible (Attarian 2009).

In addition to the above coastal-based studies, archaeologists working in the Andean highlands have also focused upon the issue of urbanism. According to **William Isbell** (1977), who emphasized economic themes in his work, both modern and preindustrial cities are best-conceptualized as "existing in reality only as a partial society, albeit usually the dominant one" (1977:1). Furthermore, urban centers exist:

> "…in an economic, political, and religio-intellectual symbiosis with rural producer communities which provide the basic energy essential to the operation of the city. In order to understand any of the diachronic or synchronic processes upon which the city is grounded, we must first understand the structural relationship between the urban center and its rural producer communities as well as the internal structure of the city itself" (1977:1).

Isbell, concentrating his field research on the massive urban site of Huari located in the Southern/Central Andean highlands, argued that Huari was a regional administrative center that coordinated the production and redistribution of goods between rural communities, or "specialized production centers" (located within a variety of "contrasting" environments) and between these same rural communities and the urban core (1977). In addition, Huari contained permanent enclaves of formerly regionally located populations within its urban core (1977). In short, Huari came to control and embody numerous distinct ethnic groups located within ecological niches throughout a vast territory, and forced these groups to produce for the conquest-oriented empire. Excess regional production was placed within centralized storage facilities and was used to maintain organs of bureaucratic control and to feed armies campaigning to add to Huari's considerable landholdings.

Alan Kolata, in an article focused primarily upon the nature of the Andean city-state (1997), provides a final model of Andean urbanism to be considered. The primary focus of his attention is the development of the urban polities of Chan Chan, Cusco, and Tiwanaku, all of which share a number of features in terms of their "form, function, and historical evolution" (Kolata 1997). For example, all three of these Andean urban sites have a symbolically dominant metropole and numerous secondary sites that were politically dominated by the center. When compared to other preindustrial urban polities located throughout the world, Andean urban sites tend to lack administered markets, display little social heterogeneity, and have relatively low population density (Kolata 1997).

Kolata argues that urban Andean capitals (and secondary centers) were primarily regal and religious in their nature and were organized as an *oikos*, which can be defined simply as the authoritarian household of a king, prince, or manorial lord. As a result, the nature of the Andean city was not economic, but ideological and political. They were the seat of royal lineages and cults of ancestor worship as underscored by the presence of deceased ancestors and funerary furniture necessary for their storage, care, and periodic emergence for public rituals. Urban-dwelling elites used the sites for self-expression, while the masses were rarely granted admittance other than for periodic ceremonial activities rendering them nothing more than "religious tourists in an elite theme park" (Kolata 1997:247). Architecturally, there can be little doubt that access into Andean urban centers was restricted as many are surrounded by high imposing walls with restricted points of access. Even once access is gained, one must negotiate tortuous passageways in order to navigate through the internal architecture. Restricted access such as this gave the visitor (many of whom were visiting the urban center on a pilgrimage) a sense of both belonging and separation – separation that was further underscored by origin myths that explained differences in status as being the rooted in time immemorial.

The above discussion of literature related to New World urbanism is illuminating for several reasons. For example, despite the differing theoretical perspectives adopted by the various scholars, there are some interesting commonalities. Architectural analysis, used to identify urban cores and associated peripheral communities (Isbell 1977; Moseley 1975, 1982), estimate populations (Kolata 1997; Moseley 1975, 1978, 1982), elucidate sociopolitical organization (Isbell 1977; Moseley, 1975, 1982), and identify generally agreed upon features or aspects of urban life such as the presence of a multiplicity of ethnic/social statuses play a central role in all of the above studies. Settlement pattern analysis is also critical to most of the above published works. Data produced through large-scale, full-coverage survey allows scholars to speak to issues related to core/periphery relations (Isbell 1977; Kolata 1997; Moseley 1975, 1982; Rowe 1963), regional development (Kosok 1963; Willey 1953), and the interaction between urban settlement systems and the environment (Isbell 1977; Moseley 1975, 1978, 1982; Rowe 1963; Willey 1953). Prior studies have also identified that the process of urbanization can lead to an increase in the structural and organizational centralization of diverse activities and services related to the economy, politics, ritual activity, and social organization (Cowgill 2003; Schaedel 1968, 1972; Smith 2003). The value of these previous studies to this current work is obvious as they have created baseline methodological and theoretical templates and perspectives that can be used to interpret North Coast urban process from the perspective of Jatanca. Chapters 3, 4, and 5 provide the reader with much of this baseline data as they examine Jatanca's placement within the landscape, associated ceramics, and excavation results.

Yet there are many areas and themes related to the development of North Coast urban architecture and landscapes that remain somewhat understudied. For example, more recently, social scientists have demonstrated that built environments do much more than passively mirror society but in fact actively shape and reproduce sociopolitical practices (Moore 1996; Rapoport 1982; Smith 2006). Collective memories (or "social memories") have also been identified as having a powerful influence upon the stylistic development of monumental architecture and both the built and natural landscape (Bruck and Goodman 1999; Connerton 1989; Pearson and Richards 1994; Yoffee 2007). Indeed, given its visibility and symbolic importance, monumental architecture can also be used as a medium by which individual and collective views of the past can be actively manipulated for political purposes through acts of remembering and strategies of forgetting (Bevan 2006; Van Dyke and Alcock 2003; Yoffee 2007). It is to these topics, such as the fluid relationship between monumental architecture and sociopolitical reification (Chapters 6, and 7); the active role of social memory in the development of North Coast monumental architecture (Chapters 7 and 8); and the purposeful manipulation of monumental architecture as a means of selectively "forgetting" and "remembering" the shared past (Chapter 8 and 9), that this dissertation will ultimately turn. Any attempt to understand the social relations that are responsible for urban architectural development on the North Coast of Peru must take these latter topics into account as well, rather than simply utilizing a "trait checklist" for urban identification.

Finally, in examining the above ideas of urban process with regard to the North Coast of Peru – especially in light of data from Jatanca - there can be little doubt that the dynamic interface between the changing environment and technological development – especially as associated with irrigation agriculture – were of fundamental importance in the development of the urban landscape, at least during its initial phase (Moseley 1975). As will be demonstrated in Chapter 3, the geophysical location of Jatanca was likely influenced by environmental and engineering concerns that revolved around the implementation and development of a complex series of canals that surround the site. Without irrigation canals, development and maintenance of a site the size of Jatanca would have been largely impossible, as canals provided water for domestic crop production, household consumption, and compound construction. Chapters 4 (ceramics), 5 (excavation) and 6 (compound architecture) further demonstrate that the vast majority of the population of Jatanca were farmers who lived in a concentric circle around the compounds and were involved primarily in agricultural activities on a day-to-day basis.

This is of course not to argue that other factors were not also at play in North Coast urban development. A series of large, nested plazas that physically dominate the compounds have also been identified at Je-1023. Chapter 7 will argue that in addition to being the loci of secular activities (see also Chapter 8), at least periodically, these plazas were used for ritual activity that may have been critical in the maintenance of sociopolitical ties that bound families and neighbors alike into extended kinship networks of political importance. However, it should be emphasized that Jatanca was primarily a settlement composed of farmers who in a "typical" day participated in coordinated activity that revolved around the continued maintenance of irrigation agriculture, and therefore Jatanca was not an incipient regal ritual center such as that described by Kolata (1997) for Chan Chan, Cusco, or Tiwanaku.

The Physical Environment of the Andean North Coast Peru

This section provides the reader with a basic background in the geophysical environment of the Peruvian North Coast, ultimately narrowing its focus to the south side of the Jequetepeque Valley, where the environmental conditions of the Pampa Mojucape will be discussed in detail.

There are three major interrelated environments that make up the Peruvian North Coast and are fundamental toward understanding any form of social organization from highly mobile hunter/gatherers, to sedentary agriculturalists living in an urban environment: the Pacific Ocean, the Andes Mountains, and the coastal desert (Kosok 1965; Lanning 1967; Moseley 1975; Shimada 1994; Tosi 1960; Willey 1953). All three of these zones are interconnected via a series of river valleys oriented in more or less an east-west direction, that have been formed by rivers originating in the Andes Mountains and terminating in the Pacific Ocean. This landscape is home to an extraordinary number of complex micro-environments that were critical in shaping Andean culture – both in the prehistoric past (see Moseley 1975, Moseley and Day 1982; Murra 1980; Shimada 1994) as well as the present (see Abercrombie 1998; Bastien 1978; Meyerson 1990; Reader 1990; Sallnow 1987). This section of the dissertation will briefly describe these zones, how they are interrelated, and some of the ways the local environment has influenced the development of urbanism along the North Coast of Peru.

The Pacific Ocean

The role of the Pacific Ocean in shaping Andean life cannot be overstated. Andean scholars have long-noted the important role played by off-shore marine fisheries in the development of incipient cultural complexity along the Peruvian coast (Bird 1948; Engel 1963; Lanning 1967; Moseley 1975). Without the abundant protein-rich resources the Pacific Ocean provides, incipient urban life along the coast would have been impossible (Moseley 1975). Peru's offshore marine fishery is one of the world's richest, with anchovies having played an especially important role throughout prehistory as local food source, fertilizer, and potential exchange item that could be used by coastal inhabitants to acquire mid-valley and highland commodities such as produce, minerals, and medicinal plants (Burger 1995; Moseley 1975).

Given that Jatanca is located only 12 kilometers from the Pacific Coast, one could infer that marine resources played an important role in the diet of the local population. An examination of Jatanca's surface deposits (See Chapter 3), excavation back dirt (see Chapter 5), and flotation samples reveals the presence of large quantities of marine animals such as *Donax*, snail, crab, and fishbone. These remains indicate that the inhabitants of Jatanca consumed marine resources on-site, and could have conceivably used them in trade transactions with neighboring mid-valley inhabitants (see Chapter 3).

Key to understanding the importance of the Pacific Ocean in daily Andean life is the Humboldt Current – a cold water upwelling that originates in the Antarctic Ocean and travels north along the South American Coast (Moseley 1975; Shimada 1994). This cold water stream contains a tremendous amount of micro and macro organisms that serve as the foundation of the food chain for aquatic life forms from anchovies to whales. The current exerts a tremendous influence over the local fisheries and the weather along the coast to as far north as 5 degrees south of the Equator, at which point the current warms, turns westward, and dissipates (Moseley 1975).

The importance of the Humboldt Current to the coastal fisheries is brought into focus during an ENSO event (see below) when the current warms slightly and/or moves further offshore into deeper water (Moseley 1975). Even relatively subtle changes such as these can result in a major disruption in the all-important fishing industry and cause a dramatic increase in rainfall along the north coast that is capable of flooding entire villages, destroying infrastructure such as irrigation canals and roads, and eroding agricultural plots (Dillehay and Kolata 2004; Dillehay, Kolata, and Pino 2004; Moseley 1975; Spellman 2000).

During non-Niño years, the Humboldt Current still exerts a significant influence over the local weather within the north coast valleys, as the prevailing offshore breezes blow across the cool ocean water and reduce the amount of on-shore atmospheric instability (Spellman 2000). During these atmospherically stable years, local rainfall amounts to only a drizzle that falls periodically from the ubiquitous stratus clouds that form overnight and generally burn off before each afternoon (Spellman 2000). Ultimately, the rapidly moving, off-shore breeze[3] blows against the west face of the nearby Andes Mountains where it is quickly lifted to a high altitude (well-over 3,000m), forcing the air to cool, condense, and fall back to earth in the form of rain within the highland region (Moseley 1975; Shimada 1994). Finally, despite being only 7 degrees south of the equator, the ambient temperature of the Jequetepeque Valley coastal area typically doesn't exceed 80 degrees Fahrenheit due largely to the presence of the Humboldt Current, over which the almost-daily off-shore afternoon breezes are cooled.

[3] According to Spellman (2000:24), "Persistent strong winds are common in drylands, often a consequence of extensive flat areas with little vegetative cover to disturb air movement in the boundary layer."

The Andes Mountains

The rugged terrain of the Andes Mountains constitutes the second highest mountain range in the world and, like the Pacific Ocean, has a profound impact upon those that live within its shadow (Brush 1976; Shimada 1994; Tosi 1960). In general, the western edge of the Andes terminates close to the Pacific Ocean thereby greatly limiting the amount of arable land available along the coast (Moseley 1975; Shimada 1994). As one travels from the central coast north toward the Piura Valley, however, the mountain chain recedes slightly from the shoreline, permitting an increase in arable alluvial bottom land (Bawden 1996; Moseley 1975; Shimada 1994). In addition, within the northernmost limits of Peru, the mountain chain itself begins to narrow and segment, allowing for greater ease in coastal/jungle trade and exchange (Shimada 1994; Schjellerup 2005). Compared to valleys located further to the south, such as the Huarmey, the mountains within this region receive more rainfall and are covered in greater amounts of vegetation (Doig and Ligabue 2003; Shimada 1994; Schjellerup 2005).

As one ascends in elevation, numerous diverse ecological zones that provide various raw materials and food stuffs to the inhabitants of the Andes are encountered (Brush 1976; Shimada 1994). Changes in elevation as small as 50 meters provide dramatically different ecological habitats that are suitable for a wide variety of wild flora, fauna, and domesticated crops utilized by the inhabitants of the north coast region (Brush 1976). Archaeological data indicate that the inhabitants of the highland Andes have exploited these various ecological niches so as to maximize the diversity of their diet and minimize risk for thousands of years (Isbell 1977; Murra 1980; Shimada 1994). The seasonal highland rains that fall as a result of the rapidly rising brisk winds generated from the Humboldt Current are funneled into the Pacific watershed via numerous valley bottoms and feeder streams into a series of highland/coastal river systems that ultimately empty into the Pacific Ocean (Moseley 1975).

In general, the rivers of the North Coast originate in the small-scale tributaries of the highlands and flow to the west through steep sided canyons (Kosok 1965).

Ultimately, as they reach the coast, the slope of the land begins to flatten, at which point the rivers reduce their speed and begin to drop their sediment load forming large alluvial fans. These rivers are non-navigable and seasonal with the peak water flow occurring during the months of February through May[4] (Kosok 1965; Moseley 1975). At times, the minimum and maximum volumetric outputs are exacerbated by ENSO events (Moseley 1975). In addition, it should also be pointed out that year-to-year fluctuations in discharge occur due to variability associated with the amount of water that is being diverted from the river course into nearby fields for the purpose of irrigation (Kosok 1965; Shimada 1993; see below).

The North Coast Desert

The Peruvian north coast (Figure 1.1) is made up of some 14 independent river systems that originate in the Andes, run in a generally east-west direction, and ultimately empty in the Pacific Ocean. These river valleys stretch across some 500 km of desert coast between the Piura Valley in the north and the Huarmey Valley in the south, which marks the somewhat arbitrary divide between the north and central coastal regions (Bawden 1996).

More than one third of the world lives in arid or semi-arid environments, which make up 40% of the total land area of the earth, or about 60 million km^2 in total (Barker and Gilbertson 2000). For the uninitiated, a superficial examination of a dryland region leaves one with the impression that they are uniformly devoid of much in the way of flora or fauna, due perhaps to the general lack of annual rainfall[5]. This, however, would be a mistake, as drylands in general are not homogenous landscapes (Spellman 2000:38). In fact, north coast deserts have an incredible amount of environmental diversity that can be readily exploited by local populations (see Dillehay and Kolata 2004; Kosok 1965; Moseley 1975; Shimada 1987, 1994). The Jequetepeque Valley

[4] Eling (1987) noted that the range of Jequetepeque River discharge varied from as much as 265 l/s in November of 1952, up to 1,200,000 l/s in November of 1953.

[5] The annual coastal precipitation in the Jequetepeque River Valley is 23.1mm (Dillehay and Kolata 2004; Eling 1987).

contains many species of flora (cacti, bromeliads, algarroba, etc.…), and fauna (lizards, birds, fox, etc...) that have adapted to the dry desert conditions. As with contemporary populations, plants were used by prehistoric populations for day-to-day necessities such as building fires, food, and architectural construction (Eling 1987; Shimada 1994). In addition, the desert is not nearly as bereft of water as it appears. Natural pockets of water are found throughout the Peruvian coastal valleys in the form of artesian springs, lakes, and bogs that are capable of providing a rich variety of floral and faunal resources to those inhabiting these zones (Dillehay and Kolata 2004; Eling 1987; Kosok 1965; Parsons 1968; Rowe 1969).

Of greatest importance regarding this aspect of the Andean coastal environment is the desert's amenity to irrigation agriculture. Between the leading edge of the Andes Mountains and the Pacific Ocean, these desert zones have numerous gently sloping open pockets, or *pampas*, that are largely free of obstruction, rendering them highly suitable for the construction of water management features such as canals, check dams, *mampuestos*, and *surcos* (Dillehay et al. 1998, 1999, 2000; Dillehay and Kolata 2004; Dillehay, Kolata, and Pino 2004; Eling 1986, 1987; Kosok 1965). Furthermore, the coastal desert soils are "young" making them nutrient rich and well-drained, which reduces the amount of detrimental salt build-up (Kosok 1965). Kosok (1965) argued that coastal urbanism (as measured by population density) was made possible by the accumulation of thick, alluvial soils that could be brought under agricultural production via irrigation. Furthermore, since these soils were capable of supporting dense populations, "closer and more complex social relationships within and among coastal communities" were able to develop (Kosok 1965:12). Kosok's developmental scheme further argued that irrigation agriculture within the coastal deserts necessitated less energy expenditure than did highland agriculture, a predictable surplus, and the ability of local rulers to use this surplus for their own ends allowing for the rapid development of class-based society along the coast.

While such an environmentally-based view of urban development would be considered overly deterministic by today's theoretical standards, it does underscore, nonetheless, the importance that irrigation agriculture may have played in the development of urban sites along the North Coast. Given the large number of canals that radiate across the Pampa Mojucape, it seems likely that logistical considerations related to the use of irrigation agriculture were of key importance in determining the location of Jatanca (see Chapter 3).

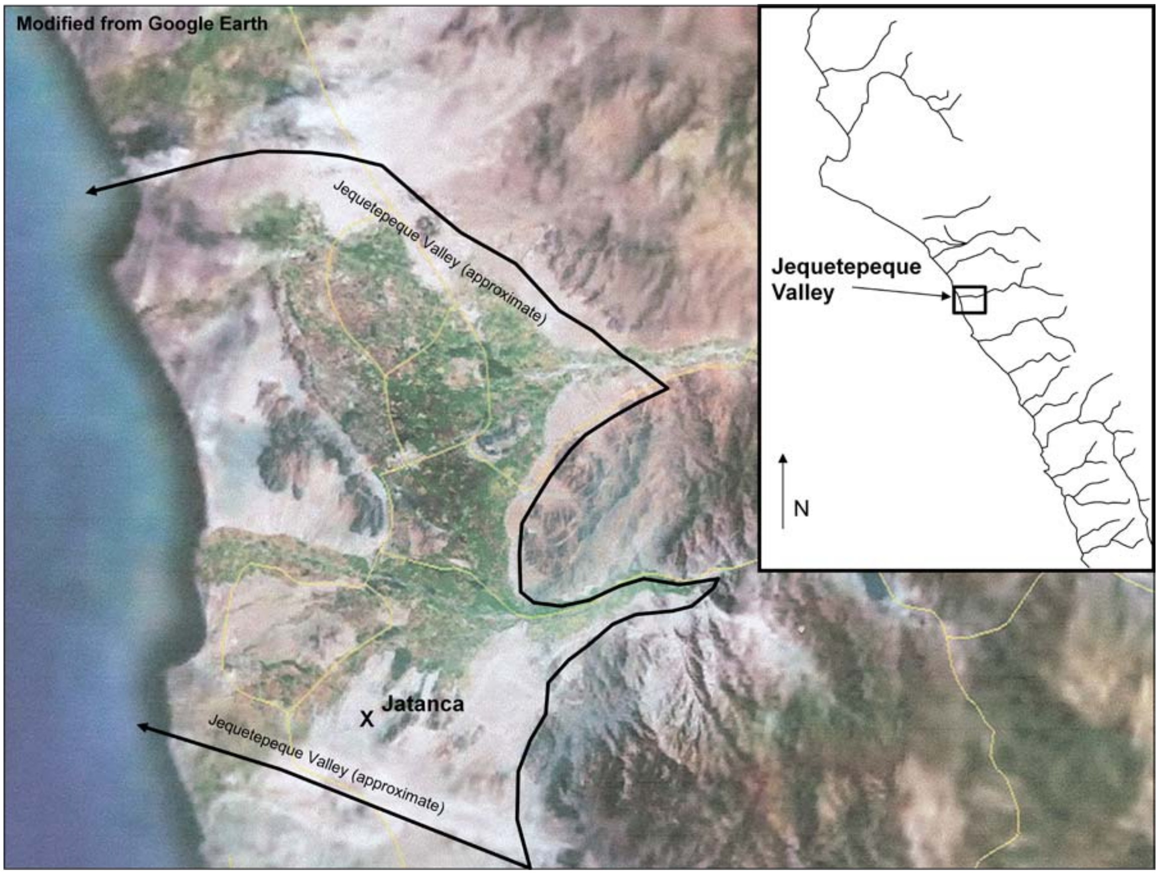
The Jequetepeque Valley

The Jequetepeque Valley is a relatively large valley[6] flanked by sloping alluvial plains, and is located in the central-northern portion of the Peruvian north coast between the Chicama River Valley to the south and the Zaña River Valley to the north (Dillehay et al. 1998, 1999, 2000, 2009; Hecker and Hecker 1990; Kosok 1965). Defining the actual extent of the Jequetepeque Valley is somewhat arbitrary, but for the purposes of this dissertation the northern boundary will be drawn along the seasonal Rio Seco, with the southern boundary being marked by the Quebrada Cupisnique (Figure #2.1).

The Jequetepeque River descends from an altitude in excess of 3300 meters, has numerous tributaries along its north and south bank, and passes by modern cities and towns such as Cajamarca, Chilete, and La Ciudad De Díos along its 160 km length (see Eling 1987; Kosok 1965). Despite not being navigable, the river still plays an important role in transportation, as its surrounding banks provide a relatively expedient means of moving goods and people between highland and coastal communities (Kosok 1965). For many of the coastal inhabitants, however, the main economic importance of the Jequetepeque River is its amenability to irrigation agriculture – especially from approximately 300 meters amsl down to sea-level - a zone within which large-scale irrigation agriculture has traditionally been practiced (Eling 1987; see also Kosok 1965). The flat pampas north of the Jequetepeque River have been especially valuable, as low-lying coastal mountains partially block the daily offshore winds, greatly increasing the number of crops that can be successfully grown (Eling 1987).

[6] Maximum extension of irrigated land = 88,000 hectares (Eling 1987). However, considerably less land is being used for irrigation agriculture today (Kosok 1965).

Figure 2.1 - Approximate Area of Jequetepeque Valle



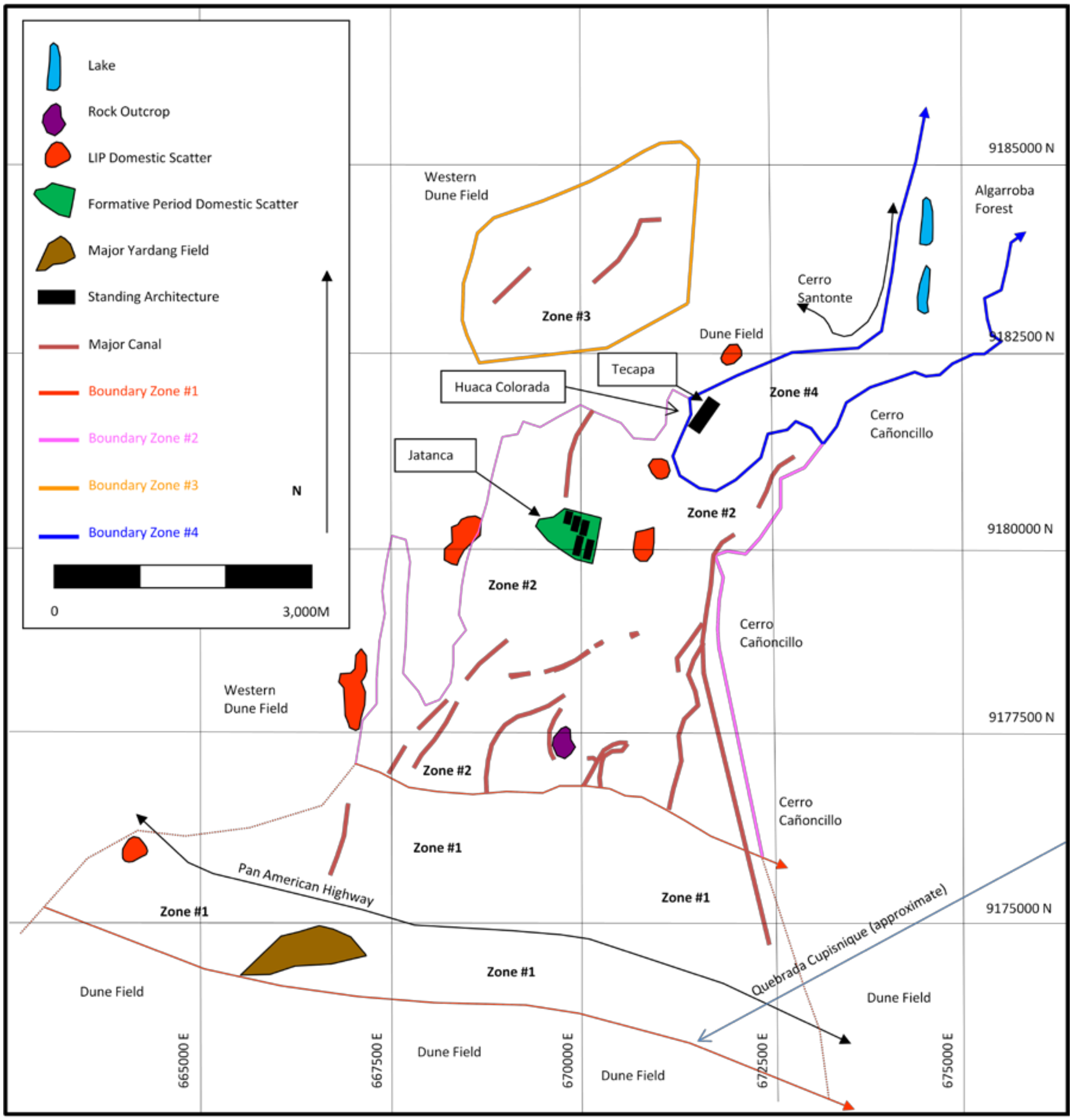
The Pampa Mojucape

The Pampa Mojucape is located in the southernmost portion of the Jequetepeque River Valley and makes up the primary study area of this dissertation. It covers a large area spanning from the Pacific Ocean in the south/southwest up to Cerro Cañoncillo and Cerro Santonte in the north. Figure 2.2 (below) depicts Je-1023's location within the pampa relative to natural features, such as the *cerros*, and constructed features such as the canals that antedate, are contemporary with, and postdate the occupation of Jatanca (see Chapter 3). This area is environmentally diverse and contains numerous ecozones such as an algarroba forest, lakes, open desert, stationary dunes, barchan dunes, and rugged, low-lying foothills. Far from the "sterile" environment that many associate with desert life, these various micro-environmental zones provided many of the items necessary for daily life such as water, shelter, tools, construction materials, firewood and food (see Eling 1986, 1987; Kosok 1965; Shimada 1994; Spellman 2000). The pampa's hydrological slope runs generally from the northeast to southwest, thereby permitting the efficient irrigation of much of the area (Eling 1987). Two small mountains, or *cerros*, are of special importance to the pampa due to their close proximity: Cerros Cañoncillo (Figure 2.2) and Prieto Espinal. While not especially large by Andean standards, these two mountain ranges visually dominate the local landscape as they rise some 350-400 meters above the otherwise flat terrain. The upper peaks of the *cerros* are covered in a thick layer of *tilandsia* (an epiphyte) that could have been an important source of fuel for local inhabitants, as it is in many communities today (Shimada 1994).

When examining aerial images, among the most obvious feature within the Pampa Mojucape is the Quebrada Cupisnique (Figure 2.2). The quebrada originates in the foothills of the Andes, is approximately 50 km in length, and runs east to west. The northernmost edge of the quebrada passes approximately 2-3 km to the immediate south of Jatanca and effectively cuts the Pampa Mojucape in half with a narrow, fan-shaped wash zone that is approximately 3 km in width. While today this quebrada carries water only during El Nino years[7], during which time it is a formidable feature, it should be noted that it is possible that in 2500 YBP, the quebrada carried water seasonally, or even continuously. Therefore, it may be that the presence of this quebrada was an important factor in the decision-making process associated with Jatanca's geophysical location (see Chapter 3).

[7] During the El Nino of 1998, water runoff from the Quebrada Cupisnique caused extensive damage to the Pan American Highway, slowing traffic within the Jequetepeque Valley (personal observation). According to Elera (1998) , the same thing happened in 1983 as well.

Figure 2.2 - Pampa Mojucape



Pampa Mojucape Environmental Dynamics: Dunation, ENSO Events, and Yardang Formation

There are three especially important environmental processes that occur on the Pampa Mojucape and had a profound effect upon both prehistoric residents, and subsequent archaeological work: dunation, ENSO events, and yardang formation (see Eling 1986, 1987; Dillehay and Kolata 2004). Understanding the impact of these three phenomena is critical toward understanding the culture history of Pampa Mojucape.

The Barchan Dunes

The impact that the barchan dunes had on prehistoric settlement along the North Cost (see Moseley 1992) and within the Pampa Mojucape cannot be overstated (see Chapter 3). Somewhat ironically, a major factor in the dune formation and inundation was the success and expansion of irrigation agriculture that poured tons of fine silt into the Pacific Ocean every year. This silt moved slowly to the north, and was blown back onto the land in the form of dunes – especially during times of tectonic disruption that cause major shoreline uplifts (Moseley 1975; Shimada 1993).

The majority of these crescent-shaped dunes form near the north bank of the Chicama River valley within the Puerto Chicama region (located approximately – 25 kilometers to the south of Jatanca), and are pushed by prevailing winds to the north, covering the intervening distance at a rate of between 45 and 60 meters per year (see Dillehay and Kolata 2004; Eling 1986, 1987; Ubbelohde-Doering 1966). By the time many of these dunes reach the Pampa Mojucape, they are upwards of 20 meters in height and well over 100 meters in width (see Figure 2.3 and 2.4). The spacing between the individual dunes can be fairly close within a large cluster (as little as 30 meters), making these mobile features an extremely formidable obstacle to architectural and agricultural development within the pampa (Dillehay and Kolata 2004).

Figure 2.3 and Figure 2.4 - Barchan Dunes on Pampa Mojucape

The formation of these dunes, however, is not restricted to the interface between the Pacific Ocean and desert coast. Barchan dunes also form within the leeward side of the various *cerros* and smaller rock formations that surround the Pampa Mojucape due to the effect of "wind-screening" (see also Eling 1987). The rapidly-moving, daily winds that blow across the pampa carry large amounts of wind-born sediment. When the wind is "screened" by a large object and slows even slightly, the sediment is dropped, forming small piles within the screened area. As these piles grow, they become elongated due to the differential rates at which sediment is dropped. Eventually, these elongating piles break away from the area behind the screen and begin to migrate to the north, rapidly assuming the crescent form of a barchan dune. As they move out onto the unprotected pampa, they too begin to function as a windscreen and capture additional blown sediment, significantly increasing their size. Eventually, these barchan dunes, like those formed on the coast, can become huge during their migration to the north.

According to Eling (1987), the sand dunes are most active during periods when there is a substantial amount of tectonic uplifts that result in "vertical shore displacements" (see also Dillehay and Kolata 2004; Moseley 1975). Using Moche V ceramics, aeolian sand, and yardang position (see description below) as a chronological indicators, Eling (1987) argued that the first major influx of sand occurred sometime prior to AD 500 due to an even earlier vertical uplift (perhaps as early as between BC

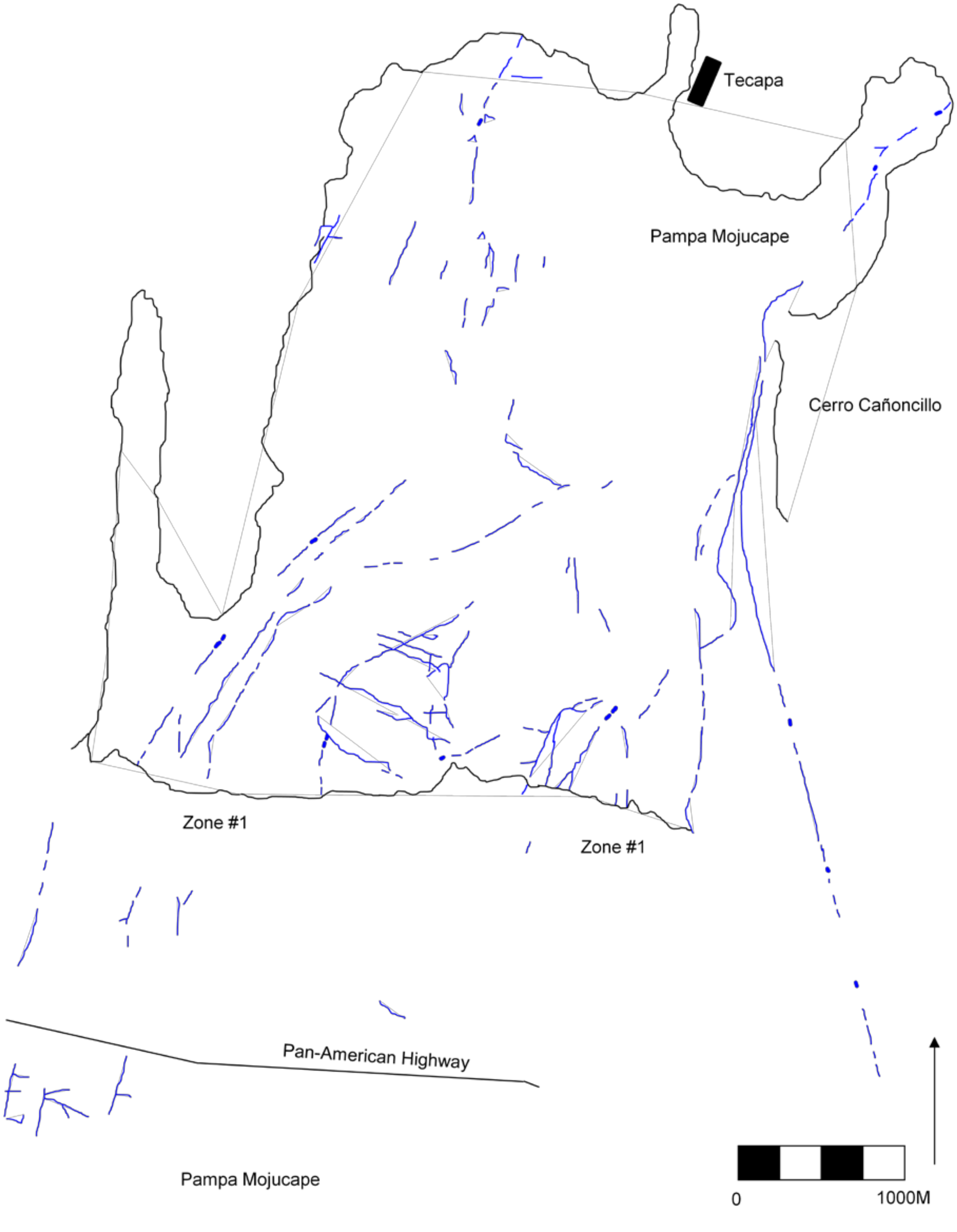
1500–BC 1000). Using a figure of 45 meters per year, Eling (1987; see also Moseley 1975) argues that sometime during the "first millennium before Christ" the Pampa Mojucape would have begun to fill with sand. This process was not halted until approximately AD 500 when the Moche began to irrigate on top of the accumulated sand, which greatly reduced further accumulation (Eling 1987).

Dillehay and Kolata (2004) argue that there have been two peaks of aeolian sand activity. The first peak occurred during a sixteen-year period (AD 524-540) during the 6th Century, a time when the Moche occupied the massive construction of Huaca Colorado. Dillehay and Kolata (2004) argue persuasively that this upwelling of dune activity probably coincided with a series of droughts between the dates of AD 524-540, AD 563-594, and possibly AD 636-645 as well. The second peak of dune activity occurred during the mid 13th century and was linked to the drought of AD 1245-1310 (Dillehay, Kolata, and Pino 2004). During this cycle of drought/dune activity, the Chimú probably occupied the site of Tecapa – also located on the Pampa Mojucape approximately 2 kilometers to the north of Jatanca (Figure 2.2). Ultimately, however, Dillehay and Kolata (2004) argue that Tecapa was abandoned at some point during the late 14th Century – perhaps as a direct result of local dune encroachment in both the urban core of Tecapa and within the outlying agricultural fields and settlements. Excavation profiles from these areas display a sequential pattern of flooding episodes followed by the deposition of aeolian sands due in all likelihood to periodic dune activity (Dillehay et al. 1998, 1999, 2000; Dillehay and Kolata 2004).

For the purposes of this work, it is critical to understand the impact that barchan dunes had on prehistoric activities and settlement patterns, as well as their effect on contemporary archaeological visibility within the study zone. Waxing and waning dune activity could have played a key role in the periodic occupation and abandonment of both Jatanca and Tecapa and agricultural activity in general within the Pampa Mojucape (Eling 1978; Dillehay and Kolata 2004; Ubbelohde-Doering 1966). However, if the Quebrada Cupisnique was carrying water during upswings in dunation activity, then the Pampa Mojucape may have been somewhat sheltered from migrating dunes, due to their being washed away by the east-west running river (see Chapter 3). The periodic dunation of the pampa may have also resulted in the eventual adaptation of a repetitive layout of major north-south irrigation canals during the Chimú/Chimú-Inca occupation of Tecapa (Late Intermediate Period-Late Horizon) in an attempt to mitigate the impact of the periodic influx of sand dunes (Dillehay and Kolata 2004; Dillehay et al 2004; see also Chapter 3). In this scenario, as sand encroached within one sector of the pampa, water could be diverted into relatively dune-free areas (Dillehay and Kolata 2004; see also Chapter 3).

Finally, from a purely taphonomic perspective, understanding dune movement and accumulation is critical when analyzing settlement pattern and architectural data, as these natural features move and redeposit surface ceramics and obscure archaeological remains – sometimes on a relatively large scale. According to Eling (1987:54-55), "...a building complex north of Cañoncillo appeared from under the large drift/dune formations only briefly in 1977, to be recovered by sand in a matter of months." Internal architecture such as rooms and accesses associated with Jatanca's compounds were recorded periodically over the course of 13 months as the barchan dunes moved through the site and exposed previously obscured details. These topics will be covered further in Chapter 3.

Figure 2.5 - Pampa Mojucape Canal System – All Mapped Canal Segments



ENSO Events

While sand accumulation via the barchan dunes is a serious endemic problem that continues to confront contemporary coastal farmers, it continues unnoticed by the vast majority of the people in the world. This is not, however, the case with ENSO events which instead seem to be covered enthusiastically by the world media. El Niño events (or ENSO) are irregular, but recurrent, and can have a devastating short-term impact on both the land and sea as normal marine and meteorological cycles break down (Anderson, Maasch, and Sandweiss 2007; Moseley 1975, 1992). These events occur as the result of a poorly understood alteration in the usual flow of water off of the South American coast. During a typical year, the cold Humboldt Current travels up the South American coastline carrying with it an extraordinary abundance of marine micro-organisms that serves as the foundation for the local food marine chain (see above). This current travels largely unimpeded until it reaches approximately 4 degrees south of the equator (the approximate border between Peru and Ecuador), at which point it collides with the warm-water Equatorial current, forcing both currents out into open water where they eventually dissipate (Anderson, Maasch, and Sandweiss 2007; Moseley 1975, 1992).

During a Niño year, the powerful southeasterly winds that help drive the Humboldt Current north along the coast shift and begin to blow from other directions – typically the west (Anderson, Maasch, and Sandweiss 2007; Moseley 1975, 1992). With the Humboldt Current weakened, the warm-water Equatorial Current is able to penetrate further south than usual and is able to override the colder, "heavier" Humboldt Current, forcing it down to depths as low as 90 meters below the surface, thereby negatively impacting the delicate balance of the cold-water marine food chain along the North Coast (Anderson, Maasch, and Sandweiss 2007; Moseley 1975). For example, as plankton and other cold water micro and macro organisms that ride within the current are diverted from their normal course, the small fish dependent upon these organisms for food either perish or are forced to move into deeper water in order to eat. Ultimately, then, this has a catastrophic domino-like effect, as the other species higher in the food chain are also forced into deeper water, making them far less accessible, if not altogether absent, to local fisher folk who depend on certain near-shore species for their survival (Moseley 1975, 1992). The impact of ENSO events is much greater along the North Coast than it is along the Central Coast, and the resulting devastation depends quite a bit upon the strength and duration of the warm water's southward thrust (Anderson, Maasch, and Sandweiss 2007; Moseley 1975, 1992). In fact, the influence of a Niño event is rarely felt as far south as the coastline at Lima, which lies at approximately 12 degrees of latitude south of the equator (Moseley 1975).

The Enso event has another negative repercussion for those who live along the North Coast which comes in the form unaccustomed coastal heavy rainfall[8]. As the winds shift from the southeast and begin to blow from the west, the cold water Humboldt Current loses its northward thrust and is overridden by the Equatorial Current, significantly warming the surface water. Furthermore, the westerly winds no longer blow across cool water but instead across warm, relatively tropical water, allowing them to pick up significantly more moisture which ultimately falls as rain when the winds meet the desert coast (Anderson, Maasch, and Sandweiss 2007; Moseley 1975). Massive rainfall events on dry desert soils have the effect of creating numerous, catastrophic flashfloods across the landscape that can wipe out roads, agricultural fields, and villages overnight. Indeed, Michael Moseley (1992) argues that the Moche site of Sol/Luna (see below) was devastated by a prolonged drought (AD 562 and AD 594) during which as much as 30% of the available topsoil was blown away from fallow fields and reduced agricultural production by one-third for an entire generation (Moseley 1992). This drought was followed by massive El Niño flooding that destroyed large portions of the site, necessitating a large-scale rebuilding effort by the site's inhabitants (Moseley 1992). Despite the rebuilding effort, Sol/Luna was ultimately abandoned – perhaps due to the subsequent large-scale barchan dune activity that buried everything in their path with the exception of only the largest huacas (Moseley 1992).

[8] Somewhat ironically, perhaps, the highlands – especially to the south in the altiplano, tend to simultaneously undergo a period of drought during an El Niño (Anderson, Maasch, and Sandweiss 2007; Moseley 1992; Thompson 1980)

It is of interest to note that the occurrence ENSO events have been recorded as far back as 1500BP as measured by oscillating deposits of sediment (which results from air-born dust) and ice accumulation within ice cores collected from glaciers in Quelccaya, near Cuzco[9] (Thompson 1980). Signatures within these deposits indicate that ENSO events occurred on the North Coast during 511-512, 546, 576, 600, 610, 612, 650, 681, and "at similar frequencies in later centuries[10]," with some events lasting as long as eighteen months (Moseley 1992:209).

In the face of prolonged ENSO events, prehistoric North Coast populations utilized multiple strategies in coping with the resulting environmental catastrophe (Dillehay and Kolata 2004; Dillehay et al 2004). For example, according to Moseley (1992), as a result of prolonged El Niño events, some prehistoric coastal populations relocated *en masse* into areas such as the adjacent highlands. In the Jequetepeque Valley, Dillehay and Kolata (2004; see also Dillehay 2001; Dillehay et al 2004) noted that the Middle and Late Moche populations mitigated the impact of El Niño events through the construction of expedient agricultural features such as check-dams and simple terracing – especially in locations where El Nino events deposited new layers of nutrient-rich sediments. Indeed, the expedient, small-scale use of water runoff associated with ENSO events still occurs. Kosok (1965:118) noted that after an exceptional amount of rain, "the people from neighboring valleys come into these regions temporarily and divert water onto some nearby level ground. If there is sufficient water, a meager crop of corn can be produced. But during the years when the water does not appear, these plots are abandoned." Even today on the Pampa Mojucape, some ten years after the last significant El Nino event, there are numerous traces of abandoned homesteads that are associated with straight-rowed furrows,

[9] Dillehay and Kolata (2004) identified the presence of four major ENSO events within the Jequetepeque Valley through the examination of radiocarbon data obtained via the acquisition of radiocarbon dates from sealed archaeological context associated with significant architectural rebuilding efforts. According to their data, four major ENSO events were dated to approximately 2150BC, AD 500, AD 1230, and AD 1770.

[10] Evidence of an especially significant and widespread ENSO event occurred *ca*. AD1100. The flooding from this event was largely responsible for the destruction of Batan Grande (Shimada 1993), destroyed much of the irrigation system surrounding Chan Chan (Kolata 1990), and large-scale construction within Pacatnamú (Moseley 1992)

shallow irrigation trenches, and pooling areas used to strategically store standing water (Personal observation 2007). Finally, the construction of redundant agricultural features on the pampa such as irrigation canals may have been an additional strategy used by later Chimú populations to offset anticipated environmental perturbations associated with ENSO events (Dillehay and Kolata 2004 – see Chapter 3). As with dune encroachment (see above), if one sector of the canal system was destroyed, another branch could be expediently brought on-line once the ENSO event had terminated (Dillehay and Kolata 2004).

Yardang Formation

The western sector of the Pampa Mojucape, which is somewhat sheltered by vegetation and stable dunes, has numerous, poorly preserved yardangs – an unusual geological feature created through a combination of human and natural activities. The first phase in yardang formation is the accumulation of silt deposition due to the long-term utilization of irrigation agriculture during the Moche Period[11] (Eling 1987). According to Eling (1987), as sediment rich irrigation water drawn from the Jequetepeque River began to slow, the canals dropped their suspended particles onto the already-present deep aeolian sand (as deep as 6 meters) deposited through dunation (Eling 1987). Eventually, a hard sediment layer made up of a combination of fine organic material and hard minerals formed within the agricultural fields above the sandy layer at the rate of approximately 1cm per year, eventually reaching a depth of between 1 and 1.5 meters[12] (Eling 1987).

Once large-scale irrigation within this portion of the Jequetepeque Valley ceased, possibly due to political upheaval (Eling 1987), or environmental catastrophe such as a prolonged drought (Dillehay and Kolata 2004; Dillehay et al. 2004), the second phase of yardang formation began. First, the lack of irrigation water and moisture caused the

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[11] According to Eling (1987), approximately 3000 hectares of the Pampa Mojucape was under irrigation agriculture during the Moche Period.

[12] Eling (1987) used this accumulation rate and total sediment depth to calculate that the Pampa Mojucape must have been under Moche irrigation for approximately 100 to 150 years.

overlying layer of water-deposited soil to crack (Eling 1987). These cracks quickly eroded and enlarged due primarily to the prevailing winds that blow across the lower portion of the southern valley (Eling 1987). Pockets of especially dense matrix eroded at a slower rate and, as a result, small "butte-shaped" formations were left behind that eventually became elongated along their north-south axis as a result of the prevailing wind.

This has led to an interesting phenomenon of reverse stratigraphy within restricted areas of the Pampa Mojucape. Yardangs surfaces, which are elevated as much as six-meters above the present-day pampa, are covered in ceramics and canals that date primarily to the Late Moche Period (Dillehay et al. 1998; Eling 1986, 1987). However, around the base of these features are ceramics and canals that date to the much later Chimú/Chimú-Inca occupation during the Late Intermediate Period (Eling 1987).

Today, the yardangs in the western portion of the pampa are badly eroded and relatively low with respect to the present-day pampa surface. A few of these yardangs still have short, visible segments of canals on their surface, but for the most part surface features are no longer recognizable. Surrounding this yardang group are dense scatters of Late Intermediate Period/Late Horizon ceramics and pockets of *surcos*[13], which are probably the result of a once extensive domestic occupation. Just south of the Pan American Highway is a second series of yardangs (approximately fifteen) that are much larger than those found in the west of the Pampa Mojucape. They stand approximately three to four meters high and are as large as 50 meters long by 18 meters wide. Some of the yardangs within this cluster have eroded canals on their surface and a few badly eroded, culturally non-diagnostic ceramics. Compared to the western yardang group, there is very little in the way of culture historical material surrounding this southern yardang group, indicating perhaps that this portion of the Pampa Mojucape was not nearly as heavily inhabited as the area along the western edge (see Chapter 3).

[13] Surcos are relic agricultural furrows.

Understanding yardang formation is important as it has resulted in localized pockets of complex stratigraphy that must be deciphered and corrected for if one is to understand settlement pattern data. Furthermore, there is important chronological information that one can gather via a study of yardang surfaces. Finally, yardang depth provides a rough measure of the length and intensity of irrigation activity on the Pampa Mojucape – especially by the Middle-Late Moche.

While not trying to appear environmentally deterministic, it must be admitted that all three of the above natural phenomenon periodically affected the lives of those who lived on the Pampa Mojucape – perhaps in both conscious and unconscious ways. Indeed, Jatanca's location within the center of an open pampa surrounded by irrigation canals and away from the nearby sheltering *cerros* may represent an active choice made by the site's founders who chose to absorb the costs associated with living within an unprotected portion of the pampa (i.e. periodic dune inundation) as opposed to those associated with living in the protected margins (i.e. greatly decreased access to agricultural fields). In addition, migrating dunes and ENSO events may have been responsible for major changes in settlement pattern and perhaps sociopolitical organization (see Chapter 3). For example, barchan dune formation and ENSO events could have impacted pampa residents in many ways such as the eventual construction of repetitive elements of irrigation infrastructure that reflect strategies of anticipatory response (Dillehay 2001; Dillehay and Kolata 2004; Dillehay et al. 2004). If dune formation and ENSO events superseded the capacity of these anticipatory response systems, then these same natural disasters may have been responsible, at least in part, for the abandonment of Jatanca, and other later Pampa Mojucape sites such as Tecapa. Therefore, understanding the impact that environmental perturbations had on site formation and social organization, along with the taphonomic and interpretive issues created by yardang formation and disintegration, is critical in recreating the social history of Jatanca, from the perspective of settlement pattern analysis, landscape utilization, and architectural development.

North Coast Chronology, Settlement Patterns, and Architecture

For the sake of brevity, this section will begin with North Coast and Middle Valley settlement pattern and architectural developments that date to the Early Formative Period, focusing primarily upon large-scale monumental architecture[14]. This section will conclude with Late Formative Period architectural developments that are associated with the Gallinazo Group of the Viru Valley (Bennett 1950; Willey 1953). Understanding the trajectory of these developments, especially with regard to monumental architecture, is critical to this dissertation due to its comparative (synchronic and diachronic) analytical form (see Chapters 6, 8, and 9). The following table (Table 2.1) provides an approximation of the cultural chronology that will be used throughout this dissertation:

Table 2.1 - Approximate North Coast Cultural Chronology

Time Scale	Period
AD1476-AD1535	Late Horizon
AD1000-AD1475	Late Intermediate Period
AD750-1000	Middle Horizon
AD1-AD750	Early Intermediate Period
399-0 BC	Late Formative
1599-400 BC	Middle Formative
2099-1600 BC	Early Formative Period
2500-2100 BC	Late Archaic

The sites that this section of the dissertation will briefly describe are spread across time and space and will be discussed in chronological order for reasons of organization. This diachronic, multi-valley view is necessary in order to establish

[14] Bruce Trigger (1990:119) defines monumental architecture as follows: "Its principle defining feature is that its scale and elaboration exceed its requirements of any practical functions that a building is intended to perform." It is to this definition that I will adhere throughout this dissertation.

architectural, settlement pattern, and sociopolitical trends that can help elucidate the development and growth of urban settlements along the North Coast. Architectural developments within sites that post-date the Late Formative Period, especially as they relate to the examination of the overall trajectory of urban development along the North Coast, will be discussed as needed in subsequent chapters of this dissertation (see Chapter 4, 5, and 6). The following table (Table 2.2) lists the key sites to be discussed within this chapter, their location, and primary period of occupation:

Table 2.2 - Temporal Geographic Distribution of Selected Formative Period Sites

Site Name	Location	Primary Occupation Period
Monte Grande	Middle Jequetepeque Valley	Early to Middle Formative
Puemape	Lower Jequetepeque Valley	Early to Late Formative
Huaca de los Reyes	Upper-Lower Moche Valley	Middle Formative
Kuntur Wasi	Upper Jequetepeque Valley	Middle to Late Formative
Purulén	Lower (Coastal) Zaña Valley	Middle Formative
Jatanca	Lower Jequetepeque Valley	Late Middle to Late Formative
Cerro Arena	Lower Moche Valley	Late Formative to EIP
Gallinazo Group	Lower Viru Valley	Late Formative to EIP

Early Through Early-Middle Formative Period Architectural Developments

This section will describe key Early through early-Middle Formative Period sites within the North Coast area, focusing upon the sites of Jatanca (see Chapters 1 and 6 for detailed description), Puemape (Elera 1998), Huaca de los Reyes (Pozorski 1980, 1982), and Monte Grande (Tellenbach 1986). Unfortunately, only two of the sites from this time period, Huaca de los Reyes and Puemape, are particularly well-dated via absolute dating methods (see Burger 1992 – Appendix: Radiocarbon Dates pg 230-233; Elera 1998; Pozorski 1980, 1982). For example, the temporal assignation of Monte Grande to the Early to Middle Formative Period is based largely upon the presence of Late Huacaloma Phase ceramics (Tellenbach 1986), which date in use to approximately 900BC through 400BC (Matsumoto 1985).

Monte Grande

Some of the earliest examples of large-scale monumental architecture within the Jequetepeque Valley are located in Middle Valley (Ravines 1985, 1987; Tellenbach 1986). While there are numerous Formative Period sites of varying size located throughout this area (see Ravines 1985, 1987), one of the largest and most architecturally complex is **Monte Grande,** located on the north side of the Jequetepeque River, just upstream from the Gallito Ciega dam and downstream from the modern village of Tembledera (Figure 2.6; for maps and plans see Tellenbach 1986). Covering approximately 13 hectares, the site is highly nucleated, with the main huaca located in the center of numerous structures made of *quincha*[15] that have been identified as residences (Tellenbach 1986). Approximately 160 of these structures were uncovered during the course of Tellenbach's work and grouped into three primary types of vernacular architecture. 1) Large multi-room dwellings (17-55m^2) located near the major mounds; 2) small rectilinear structures (7-17m^2) made up of 1 or 2 rooms; and 3) circular structures located throughout the site. All of the associated structures are oriented in an "orderly manner" along a northeast-southwest axis (Fung 1988; Tellenbach 1986; Moore 2005).

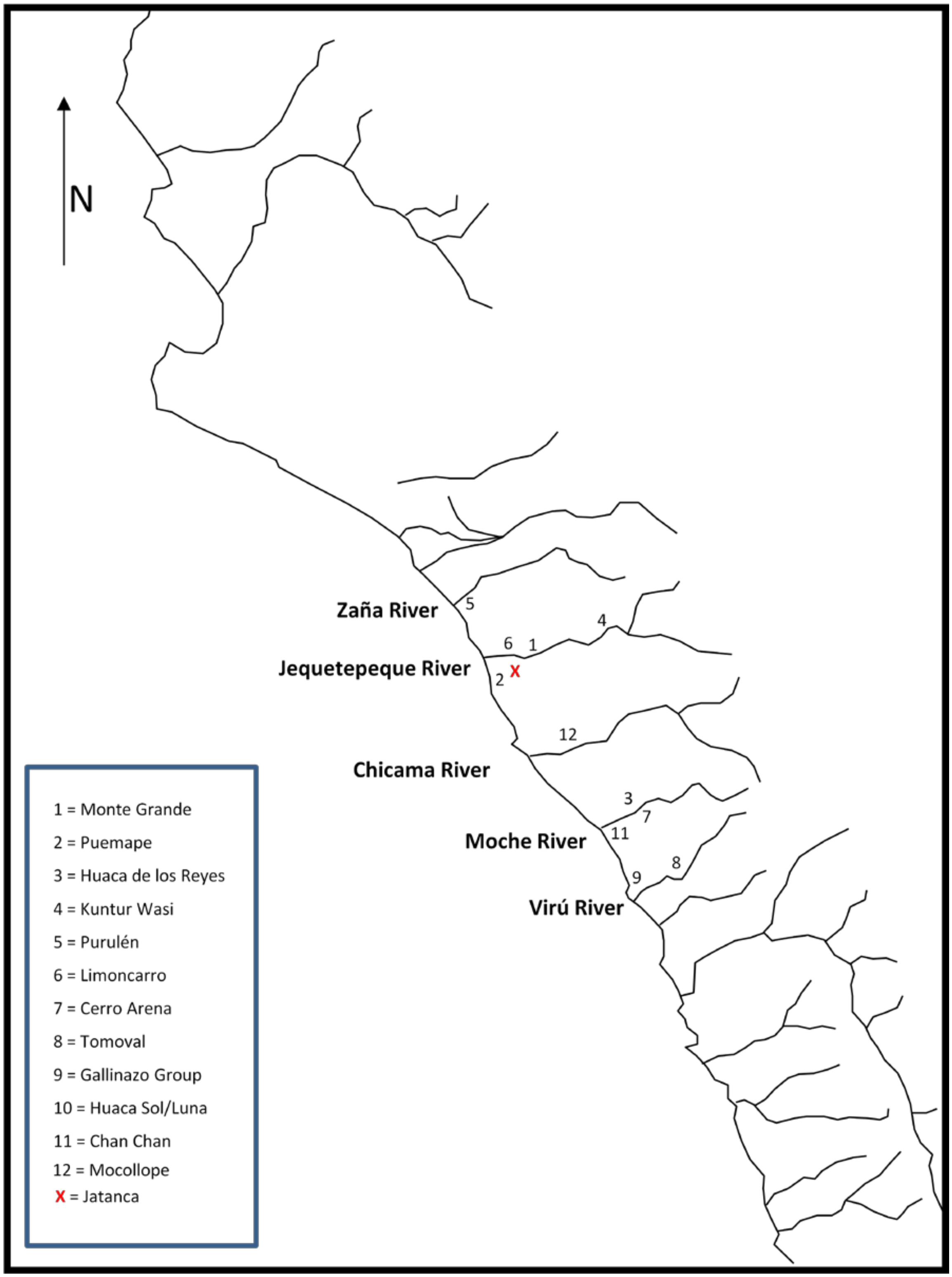
Monte Grande's main huaca complex is aligned just east of a north-south axis, and is made up of a series of sunken rectilinear plazas, axially located stairways, and terraced platforms (Tellenbach 1986). The sunken courts have four symmetrically placed niches in each wall (Tellenbach 1986). The terraces support a number of ancillary structures, most of which are rectilinear in form. In general, the overall layout

[15] Quincha is a common form of "wattle and daub" construction used in the Andean world. Typically, quincha structures are made of cane walls, or woven cane mats that are covered with a thick layer of mud.

emphasizes bi-lateral architectural symmetry, changes in elevation, and increased privacy as one travels from the south to the north (Tellenbach 1986).

Based upon an analysis of the super positioning of structures, Tellenbach (1986) determined that there were two major construction phases at the site separated by a brief hiatus caused by an ENSO event that necessitated the partial reconstruction of the main huaca. Tellenbach (1986) also argued that the distribution of domestic structures, the general orderliness of the site, and its rapid, uniform reconstruction implied that the site was hierarchically organized with a priest-class at the apex. The identification of the priest class at the apex of the social hierarchy may have been based in part upon the emphasis placed upon architectural features associated with ritual activity such as sunken courts, strong axial lines of movement, and changes in elevation (Tellenbach 1986).

Figure 2.6 – Location of Formative Period sites Discussed in Chapter 2



Monte Grande is of interest to an architectural study of Jatanca for several reasons. First of all, some settlement and architectural features found at Jatanca such as a tightly agglutinated settlement centered around a complex architectural core, common orientation, extensive use of rectilinear forms, and an emphasis on bilateral symmetry and elevational change may be adumbrated by Monte Grande. In addition, this site was occupied (and perhaps abandoned) prior to the establishment of Jatanca. With many scholars arguing that the Middle Valley regions played a key role in the development of the coastal societies (Bennett 1939; Burger 1995; Shimada 1993; Willey 1953), the architectural similarities coupled with the "time" and "place" of Monte Grande may indicate that this early site is a key piece in examining the development of monumental architecture within the North Coast area. This is an issue that will be examined further in Chapter 9.

Puemape

Puemape is an important Early Formative Period site in the Lower Jequetepeque Valley and was likely initially settled by the Cupisnique, a coastal culture group generally identified by their highly burnished, reduced vessels - especially stirrup-spout forms (see Burger 1995; Donnan 1992; Shimada 1994). Unfortunately, knowledge of the site is somewhat spotty due to looting activity and the presence of numerous sand dunes (both barchan and stable) that obscure sub-surface architectural details, including the monumental architecture (Personal observation 2008). Nonetheless, publications indicate that the occupation at Puemape appears to date to at least the second millennium BCE, and the presence of monumental architecture coupled with its early date make it one of the more important sites within the southern half of the Jequetepeque Valley (Elera and Pinilla 1990; Elera 1998).

In terms of its size and location, Puemape has an area of approximately 20 hectares and is located only a few kilometers to the south of Jatanca near the northern base of a small coastal cerro on the Pacific Ocean (Figure 2.6). Work directed primarily by Carlos Elera produced four radiocarbon dates from excavated context (see Elera 1998) that resulted in the development of the following general chronological framework at Puemape:

Table 2.3 – Puemape Radiocarbon Dates with Cultural Association

Occupation Period	Radiocarbon Date	Cultural Association
Early Puemape	4400±110 BP	Early Formative Period Monte Grande Ceramics
Middle Puemape	3920±110 BP	Classic Cupisnique Ceramics
Late Puemape	No Absolute Date	Major flood destroys Monumental Architecture
Salinar	2340±90 BP	Salinar and Viru (Gallinazo) Ceramics

The site is composed primarily of a badly-looted cemetery with a few associated structures, some of which were domestic in nature, and one that was identified as a "stone-lined temple" that sits upon a funerary ground (Elera and Pinilla 1990; see also Elera 1998 for maps and plans of the site). The walls of this complex structure are composed of large, elongated stones separated by smaller, rounder stones that are piled in columns (Elera 1998). A "yellowish-clay" was used to bind the walls, which were evidently not stuccoed on either their interior or exterior (Elera 1998). The axis of the structure is oriented just east of north-south, and has several major elements: an elevated plaza, a stairway, a secondary entrance, and an elevated terrace.

The plaza is 18m x 18m and is approximately 1.2 m in height. Aerial excavation uncovered the presence of numerous spots where burning had occurred on the floor's use-surface based upon the presence of discrete piles of ashes and red discolorations. Hematite may also have been processed within this area, as numerous grinding stones and the raw material itself were recovered from the plaza. Two postholes were uncovered parallel to the east wall, which may have been used for posts that supported a perishable roof. The stairway was approximately 6 meters wide, located on the "northeast front," and probably had six steps, only three of which were recovered during Elera's excavation. A formal secondary entrance approximately 0.6m in width was identified within the east side of the platform, along with an elevated terrace (approximately 1.3m in height) located to the south of the plaza. Unfortunately, Elera (1998) does not specify how the elevational difference between the plaza and the terrace was negotiated, although stairs were likely.

Based primarily upon excavation data and radiocarbon dates, Elera has constructed a detailed chronology for the occupational history of Puemape. The Early Puemape occupation of this coastal site is noteworthy as Elera recovered ceramics that are stylistically very similar to those found at Monte Grande (see above) based upon many shared geometric motifs (Elera 1998; Morris 1998; Shimada 1994). The Middle Puemape occupation is marked by the construction of the "Temple." Elera (1998; see also Shimada 1994) argues that Puemape's Cupisnique occupation may have ended as the result of a large flood – likely associated with an ENSO event(s), or a *tsunami* – that destroyed the "inferred Late Cupisnique masonry temple." As evidence of this, Elera (1998) cites a layer (Layer IV) of clean, coarse sand that overlays portions of the temple (including three of the central stairs), along with the displacement of many of the large foundation stones – evidently the result of a large wave, or series of waves. That the temple was abandoned after this event is argued based upon the presence of a layer (Layer III) of aeolian sand (Elera 1998). Whatever the reason, it seems clear that there was an occupational hiatus at this coastal site that lasted for hundreds of years, until the Salinar reoccupied the site sometime around 340 B.C.E. (Elera 1998).

Unfortunately, the monumental architecture at Puemape is poorly understood, making comparisons with Jatanca specious at best. Nonetheless, a few tentative points of comparison between the two neighboring sites can be made. Both sites share a similar orientation, rectilinear concept of construction, and incorporation of elevational changes into monumental architecture. Furthermore, plazas from both sites were the loci of numerous, small burning events (see Chapters 6 and 7). The chronological data associated with this site is significant in understanding Jatanca, in that it indicates that

Puemape may have been abandoned for a lengthy period of time between the flood event, and 340 BC, at which point Salinar and Virú ceramics (see Chapter 4) are found at the site. 340 BC is also within the range of initial occupation (about 500 BC) as indicated by radiocarbon dates from Jatanca (see Chapters 1, 5, and 6). In other words, the Salinar/Virú reoccupation of Puemape may be related to the slightly earlier settlement pattern developments at Jatanca, which themselves, may be at least partially the result of even earlier population shifts away from the coast-line after the possible destruction of Puemape (see also Chapter 3).

Huaca de los Reyes

The site of **Huaca de los Reyes** (Figure 2.6) is located within the Moche Valley approximately 17km from the coast and could be considered the Cupisnique "type site" (see Pozorski 1980 for maps and plans of site). In terms of its settlement pattern, using Rowe's typology (1963 – see also above), Huaca de los Reyes is probably best thought of as achoritic, since 6 months of intensive survey failed to identify any significant attendant domestic populations within the area that dated to the Cupisnique Period (Pozorski 1980).

Radiocarbon dates indicate that construction at the site began by 1300 B.C. (T. Pozorski 1980, see also 1982, 1995). The most obvious feature of the site (also known as "Caballo Muerto" is the main huaca (Huaca de los Reyes), which is approximately 250 x 210 meters, oriented east-west (85 degrees from true north) and made up of a complex series of plazas, mounds, columns, stairways, and friezes (Moore 2005; T. Pozorski 1980, 1982, 1995). In addition, two parallel wings associated with the central construction project out to the east and enclose the largest, and first of three progressively smaller sunken plazas (T. Pozorski 1980). Pozorski has interpreted this pattern of increasingly restricted space as indicating the presence of a strict hierarchy of sociopolitical organization at the site, with only the most important individuals, or classes who had access to esoteric ritual knowledge (i.e. priests), able to gain entrance to the westernmost, smallest, and most-elaborately decorated rooms (Pozorski 1980, 1982; see also Chapters 6 and 7).

Additional information and hypotheses related to the sociopolitical organization responsible for the construction of Huaca de los Reyes have been gathered though architectural analysis. Pozorski (1980) argued that the architectural "coherence" of Huaca de los Reyes argued for the presence of a single architectural vision, which further implies the presence of occupational specialists beyond priests, and that the work was done over a relatively short period of time – in this case an estimate of approximately 25 years (1980). Pozorski further estimated that some 350,000 man-work days were required to build the huaca and that huaca construction could have been undertaken and completed on a part-time basis well-within a 25 year span (Pozorski 1980). Politically, the above implies the presence of centralized rule or authority, but not necessarily a large, "permanent" workforce. In other words, the "… organizational efforts may not have been as substantial or as rigid as might be supposed" (Pozorski 1980:104).

While Huaca de los Reyes is admittedly removed from Jatanca in terms of time and space and incorporated features into monumental architecture not used at Jatanca (i.e. squared columns), there are a number of features that are shared between the two sites. Both sites emphasize the bi-lateral organization of architectural features along an axis. In addition, both sites emphasize the use of linked, progressively smaller plazas that may indicate restrictions related to interior access (see Chapter 6). Finally, as one moves deeper into the increasingly restricted areas (from west to east), the elevation of the rooms and plazas tends to increase.

Kuntur Wasi

Kuntur Wasi (Figure 2.6) is located to the north of the modern-day town of Chilete near the junction of the Middle and Upper Jequetepeque Valley (see Onuki 1994 for maps and plans; see also Burger 1995; Tellenbach 1986). This quadrangular monumental complex is oriented generally north – south, and was built on top of a leveled hill. The foundation of the site is made up of three large terraces that cover approximately 13 hectares in total area (Onuki 1994; see also Burger 1995). The focal point of the complex is a combined sunken plaza and rectilinear, stepped platform pyramid composed of four superimposed terraces (Onuki 1994). Initial access into the quadrangular complex is made via a wide, on-axis stairway that is located on the north side of the pyramid. Additional elevation changes are also made via a sunken rectangular court and an additional set of axially located stairs that connect the leveled mountaintop with the summit of the triumvirate of terraces. The central summit contains an additional sunken plaza that is not visible from the plaza below, and that was decorated with polychrome clay murals. Ancillary platforms that may have supported temples surround the rectilinear plaza on the summit, forming a U-shape that opens to the north (Onuki 1994). Still further to the south is a sunken circular court that was later filled in order to construct a rectangular court during a later phase of use (*La Copa* - 450-250 B.C.E.).

In many respects, such as the use of terraced bases and sunken pits both round and rectilinear, the monumental architecture that makes up Kuntur Wasi's architectural core is very different from that used in constructing Jatanca. Yet, while there are differences in architectural execution, many shared themes central to the construction of both sites can be identified. Both sites use a central axis around which to bi-laterally organize their respective monumental architecture. In addition, a nested series of plazas that decrease in size and access with inward progression, and that also incorporate changes in elevation characterize the corporate architecture found at the two sites.

Sociopolitically, as with Huaca de los Reyes, the nested series of sunken plazas, changes in elevation, elaborate artwork within the summit area, and sequentially smaller spaces arranged along a central axis may indicate the presence of hierarchically ordered differences in class based upon architectural access (see also Chapters 6 and 7; Onuki 1994). Mortuary data further substantiates the presence of a wide range in social status as several shaft tombs associated with the site contained individuals buried with elaborate grave goods made of gold (Onuki 1994). The location of the high-status burials, within a temple platform on the summit of the site, underscored what Burger (1995:205) argued was "…the symbolic link between leadership, divine sanction, and sacred knowledge" (see also Onuki 1994).

Purulén

Purulén (Figure 2.6) is located near southern Pacific Coast of the Zaña Valley and is one of the largest known Middle Formative Period sites (Burger 1995; Moore 2005). Alva (1986; see also Burger 1995) estimates that Purulén encompassed at least 8 square kilometers and had a monumental center that was approximately 3 square kilometers in area. Within the monumental center are 15 major structures that share a general north-south orientation and are made primarily of cut stone and fill (Alva 1986). While these structures vary greatly in their volume, they all utilize the same approximate template in terms of their distribution of space and architecture (Alva 1986). The monumental architecture is made up of two-levels: a rectangular platform mound that serves as the overall base; and a smaller second rectilinear platform located in the south upon which there is evidence of small wattle and daub constructions and columned *ramadas*. Situated to the north of the mound is a sunken, rectilinear plaza. Extensive amounts of debris were identified between and around all of the structures within the monumental core, which suggested to Alva (1986) that the occupation of Purulén numbered in the thousands. A radiocarbon date has dated the occupation at this site to 1415 B.C.E. (Alva 1987).

This site is especially interesting as Purulén combines architectural concepts from both earlier, and contemporary sites located within the Middle Jequetepeque Valley (Kuntur Wasi), and from more coastal locations such as Huaca de los Reyes. Reminiscent of Kuntur Wasi, much of the public architecture is located on top of a platform that gives the appearance of having been terraced when viewed from the central plaza. Also, there is a visual emphasis on wide axial stairways that permit, perhaps even invite, passage to the summit, which is clearly not the case at Huaca de los

Reyes where narrow stairways were used for this same purpose. Like Huaca de los Reyes, however, at Purulén the largest plaza is flanked by additional lateral constructions, whereas this area was left open at Kuntur Wasi.

As with Huaca de los Reyes (Pozorski 1980) and Kuntur Wasi (Onuki 1994), the presence of a nested series of sunken plazas, changes in elevation, a strong central axis, and plazas that diminish in size may indicate the presence of a range of hierarchically ordered classes that had differential access to monumental architectural interiors (see Chapters 6 and 7). Furthermore, the presence of domestic debris surrounding the large huacas indicates that there may have been at least two social classes at the site; those who lived on the summit within the wattle and daub constructions and those whom lived around the base of the mounds (see Alva 1986; Moore 2005). According to Alva (1986) evidence of sociopolitical centralization may also be indicated via organizational needs associated with the production, transportation, and use of stone quarried from nearby locations.

With regard to Jatanca, there are many noteworthy points of architectural comparison to be made with Purulén beyond just the shared emphasis on nested plaza space and an associated increase in elevation as one walks into the interior. Both sites also have multiple structures that could have served as monumental focal points; Purulén has some 15, and Jatanca has 5 including the Acropolis and Compounds I-IV (see Chapter 1, 3, and 6). In addition, both sites[16] have hundreds of more empemeral nucleated buildings clustered around the compounds that served in a largely vernacular capacity directly surrounding the public architecture.

Limoncarro

Located 20 km from the ocean and approximately 150 meter above sea-level, **Limoncarro** represents another Cupisnique development within the Jequetepeque Valley (Figure 2.6). The most notable architectural feature at this site is a large U-shaped temple that sits atop a three-tiered platform made up of stone and conical

[16] Admittedly, these structures have long since been destroyed at Jatanca (see Chapter 3)

adobes (Burger 1992; Hecker and Hecker 1990). The U-shaped structure creates an open-ended rectangular patio approximately 500m² in size. The central platform of the U-shaped structure is approximately 5 meters in height, while the lateral wings rise approximately 1.5 meters above the surrounding ground level[17] (Burger 1992; Personal observation 2005). Numerous floors are clearly visible within trenches created by both archaeologists and huaqueros (Hecker and Hecker 1990; Personal observation 2005; Ravines and Matos 1983). Portions of the interior architecture are fronted by murals made from adobe that depict jaguars (Pozorski 1987). Based upon the murals, Pozorski and Pozorski (1987) argue that Limoncarro's monumental architecture and nearby system of irrigation canals may indicate the presence of local ancestor and/or hero worship. According to Burger (1992) the southern lateral mound is decorated by columns.

Due to the lack of published archaeological data, it is difficult to tie Limoncarro into the broader architectural and cultural developments associated with the Early to Middle Formative Periods. Nonetheless, a few broad statements can be made. First of all, the site of Limoncarro utilized a U-shape within its overall layout that emphasizes bilateral symmetry, which was typical for other nearby Early and Middle Formative Period sites (see above). Since the plaza is located 5 meters below the top of the central structure and 1.5 meters below the wings, it would appear that differences in height were purposefully incorporated in o the overall plan of Limoncarro's monumental architecture. Since both elevational differences and bilateral planning were also used at Jatanca, their incorporation likely indicates long-term continuity in the use of these organizational concepts. In addition, it is worth noting that the main mound at Limoncarro is constructed with conical adobes, which are associated with Formative Period construction within both the Jequetepeque Valley (Hecker and Hecker 1990; Ubbelohde-Doering 1966) and other nearby valleys such as the Chicama (Bennett 1939) as well. Indeed, portions of the exterior and interior wall that make up the Acropolis also contain conical adobes mixed in with tapia wall segments, but conical adobes are

[17] It should be noted that the description of Limoncarro found in Hecker and Hecker (1990) indicates the presence of a fourth structure that largely encloses the entire patio.

generally not found within the walls of Compounds I-IV, thus providing further evidence that the Acropolis was the first structure built within Jatanca's architectural core (see Chapters 1, 3, and 6).

Cerro Arena

As a culture group, the Salinar of the Late Formative Period have not been particularly well-documented by North Coast archaeologists. They are known primarily from their white-on-red ceramics (see Bennett 1939; Willey and Ford 1949; Strong and Evans 1953; Larco Hoyle 1944; see also Chapter 4) and a few architecturally significant sites spread throughout the North Coast region from the Lambayeque Valley to the Santa Valley, with their core located between the Chicama and Santa Valleys (Shimada 1994). One of the best-known and largest Salinar sites is that of **Cerro Arena** located in the Moche Valley (Figure 2.6), which would have been occupied somewhat contemporaneously with Jatanca. This site is located along an extended ridge top that separates the southern-middle and lower valley and covers approximately 2km^2. When compared to earlier North Coast sites discussed above, Cerro Arena is somewhat unique in that it is not dominated by an example (or examples such as at the slightly earlier Purulén) of monumental, or corporate construction, such as a U-shaped, terraced architectural compound like those seen at Limoncarro, Monte Grande, and Huaca de los Reyes (Brennan 1980; Conklin and Moseley 1988).

The ridge-top location of this site may be explained as the result of several considerations related to defense, traffic control, and ability to oversee irrigation agriculture. The use of defensive locations such as this was typical of Salinar sites, many of which are located on steep hillside slopes (Brennan 1980, 1982; Shimada 1994). Roadway intersections along the ridge top are "overseen" by well-made, multi-room masonry structures, which imply that control over traffic between the upper and lower valley was of no small concern to Cerro Arena's residents (Brennan 1980, 1982). Adjacent to the site are numerous large irrigation canals which may indicate that a close proximity to agricultural activities may also have been a factor in Cerro Arena's location

(Brennan 1980, 1982). No matter the reasoning behind the location, Brennan argues that this single occupation site is precocious in terms of its urban nature and describes it as the earliest North Coast site to have, "large numbers of people occupying a large, nucleated, heterogeneous, internally specialized community" (1980:1).

Examining the site's architecture and settlement distribution more closely, it is clear that Cerro Arena is made up of some 2,000 "specialized," stone-constructed structures of varying quality that are dispersed throughout the 2km sq. site, but tend to cluster near intersecting passes (Brennan 1980). Most of the structures have been identified as simple households based upon the presence of artifacts such as hearths, food remains, domestic ceramics, and grinding stones (Brennan 1980, 1982). The differences in architectural construction quality are used by Brennan to argue for the presence of a complex system of social hierarchy within Cerro Arena. Brennan (1980, 1982) also identified the presence of numerous storage and administrative structures as well, made up of elements such as halls, patios, plazas, courtyards, and elevated benches in combinations that discouraged direct interior access (Brennan 1980, 1982). While he stops just short of identifying Cero Arena as having been organized as an urban state, according to Brennan, the large size of the site, number of diverse structures, and differences in construction quality are closely tied to subtle differences in sociopolitical status, thereby indicating the presence of a highly centralized society (1980, 1982). More specifically, he argues:

> "Cerro Arena's architecture in its designs, functions and construction suggest a correspondingly high level of specialization in economy and social organization as well as a high degree of status differentiation among the inhabitants. The wide differences among both the elites and ordinary residential accommodations further indicates that social statuses were finely and continually graded rather than consolidated into a few homogenous blocks "(1980:13)

In terms of Cerro Arena's chronological placement within North Coast site development, a single radiocarbon date indicates that the site was occupied until at least 180BC ± 220 years, placing it near the "termination" of the span of identifiable

Salinar culture[18] (Brennan 1980). Given the overlap in their spatiotemporal distribution with succeeding Gallinazo cultural sites, some consider the Salinar to be an indirect, if not direct precursor to the subsequent Gallinazo culture (Elera 1998; Elera and Pinilla 1990; Shimada 1994), despite the fact that Salinar settlement patterns and ceramics varied from valley to valley[19]. This variance may have been due in no small part to the evidently close relationship that many Salinar sites had with adjacent highland groups as evidenced by ceramic similarities shared between the two regions (Shimada 1994). Brennan (1980) argues that Cerro Arena served as the foundation of the "distinctive North Coast cultural complex" that culminated with the Moche and Chimú.

Both Cerro Arena and Jatanca are similar in some respects. For example, both sites are located in a position that allowed for the effective supervision of irrigation canal maintenance and agricultural production. Furthermore, both sites have a nucleated settlement pattern. However, despite being contemporary with Jatanca, Cerro Arena is also very different in terms of both its architecture and settlement. To begin with, Cerro Arena occupies a ridge-top, whereas Jatanca is located in an unprotected, open pampa (see Chapter 1 and Chapter 3). In fact, Jatanca has no perimeter walls and is located several kilometers from Cerro Cañoncillo, which probably would not have served very well as any kind of an expedient fortress in times of social distress or conflict. Furthermore, survey activity has yet to identify any kind of defensive structures associated with this cerro making it unlikely that Cerro Cañoncillo served in any kind of defensive capacity for the residents of Jatanca (Dillehay et al. 1998, 1999; Warner 2006). Furthermore, Cerro Arena, with over 2000 vernacular structures spread out over a distance of 2linear kms, appears to have been much larger and more densely-settled than Jatanca. It is also possible that there was a higher degree of centralized political organization at Cerro Arena than at Jatanca given that Brennan was able to identify storage-specific structures, concern with intra-site movement, and a

[18] Dates for Salinar sites generally fall between approximately 450-150BC (Brennan 1980, 1982; Moseley 1992; Moseley and Day 1982).

[19] It is of interest to note that Salinar ceramics from the Salinar component of Puemape show evidence of negative resist painting – a hallmark of Gallinazo elite-wares (Elera 1998; Elera and Pinilla 1990).

considerable range in social hierarchy. If there was any centralized storage at Jatanca, it likely occurred within the compounds, as storage-specific structures have yet to be identified at the latter site[20]. Furthermore, Jatanca does not appear to have the gradations of architectural quality that Cerro Arena has. The only obvious difference in status-based architecture at Jatanca is that some people lived within the compounds, while that vast majority of the population lived outside of the compound walls. Finally, Cerro Arena lacks any kind of a monumental focal point, whereas Jatanca has its monumental compounds, as well as the focal point of the elevated Acropolis.

The extensive settlement and architectural differences between the largely contemporary sites of Cerro Arena and Jatanca underscore the degree to which individual valley development varied within the North Coast region (Bawden 1996; Mackey 1982; Moore 1996, 2005; Moseley 1992; Shimada 1994). Based upon the defensive nature of Cerro Arena's hilltop location, and its apparent concern with controlling site inter and intra-site access, it could be argued that there was far more sociopolitical turmoil within the Moche Valley during the Late Formative Period than within the Jequetepeque Valley since Jatanca's residents do not appear to have had any concerns with site-wide defense. The architectural differences in the two sites provide additional evidence of valley-specific variation in development – despite the fact that both sites had economies that were largely agrarian-based.

Castillo de Tomoval and The Gallinazo Group

The Gallinazo culture was distributed from the Lambayeque to the Santa Valley, although their heartland was located in the Virú Valley where they evidently displaced the Salinar sometime around the 1st Century AD (Conklin and Moseley 1988; Shimada 1994; Shimada and Maguiña 1994; but see also Donnan 2009; Millaire 2009; see also Chapter 4). Unlike the Salinar, the Gallinazo generally located their settlements within the large flat floodplains of the lower valley as opposed to the middle-upper valley,

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[20] Although not particularly large, it is possible that Compound VI and VII had a storage-specific function. This possibility is discussed in Chapter 6.

although there are notable exceptions to this generalization such as Castillo de Tomoval, which is located near the Lower/Middle valley interface (Conklin and Moseley 1988; see below). In addition, the Gallinazo generally constructed large huacas made out of adobe that served in part as a visual anchor for a site (Bennett 1939, 1950; Collier 1955; Conklin and Moseley 1988; Moseley 1992; Willey 1956). Surrounding these huacas were sizeable numbers of dwellings (Bennett 1950; Conklin and Moseley 1988), prompting Conklin and Moseley (1988) to describe this settlement pattern as an emerging "ceremonial-civic center." Indeed, within the Virú Valley at the height of Gallinazo occupation during the Late Gallinazo Phase, agricultural development and attendant populations reached their apogee, and at this time most of the population lived within irregularly shaped, agglutinated villages built from adobe (Willey 1953).

While there are many Gallinazo sites within the Virú Valley, two are especially important for comparative purposes (see Chapter 6): Castillo de Tomoval and The Gallinazo Group (Figure 2.6). **Castillo de Tomoval**[21], one of many fortified Gallinazo sites in the Virú Valley, is located on a spur-tip at the restricted junction just south of the divide between the lower and upper valley (Willey 1953). The defensive nature of this site is unmistakable as the walls of the fortress are set at a steep angle rendering summit access highly restricted and physically difficult even under the best of circumstances (Willey 1953; Personal observation 2007). A series of double-faced stone walls in various states of preservation surround the *Castillo,* with the well-preserved middle wall encompassing an area about 220m from east to west and 140 meters from north to south (Willey 1953). Many of the nearby domestic structures are placed along the steep hillside that abuts the fortress along its northwest edge, making approach from this direction difficult if not impossible (Personal observation 2007). Willey (1953:116) described these domestic structures as an "Agglutinated Village" composed of houses, walls (adobe and stone), and refuse. This sector of the site is approximately 250mx75m (Willey 1953).

[21] This site is designated "V-51" (Willey 1953).

The pyramid itself is made up of three terraced platforms that become progressively smaller toward the summit. The bottom terrace is 48x37m, the middle terrace is 32x27m and the top-most terrace is 13x14m (Willey 1953). The summit rises approximately 36 meters above the lowermost portion of the surrounding pampa, but this elevation is not entirely man-made as at least half of the *castillo's* height is the result of its location on a natural rocky rise, or spur (Willey 1953). The man-made portion of the fortress is constructed primarily from cane-molded adobes placed in non-binding columns that sit on a foundation made of natural stone (Kroeber 1930; Willey 1953). Large logs made of algarroba were used liberally throughout, evidently as a means of stabilizing the structure via a series of ties (Kroeber 1930; Willey 1953). The "sunken room" as nicknamed by Willey (1953) sits adjacent to the southwest side of the *castillo*. This room, however, is not actually sunken into the ground, but achieves this effect via high walls and its proximity to the towering *castillo* (Willey 1953). Chronologically, the site dates in occupation to the Late Gallinazo, although some Huancaco[22] material has been recovered from the site as well (Willey 1953).

As with Cerro Arena, Castillo de Tomoval is an excellent example of the settlement and architectural variation that can be found throughout the North Coast during the Late Formative Period and into the transition into the Early Intermediate Period (100 AD – 700 AD). While both Cerro Arena and Castillo de Tomoval occupy defensive locations, only Tomoval saw the development of *castillo*-style architecture which was designed, in part, as a redoubt (Willey 1953). Contrast this architectural development with the open access into Jatanca and it seems clear that the architectural development of each valley was, at times, largely independent of developments within other North Coast Valleys.

The **Gallinazo Group[23]**, located on the north bank of lower Virú Valley, is made up of an estimated 30,000 rooms covering an area approximately 5 km², making it by far the largest of the Late Formative Period Gallinazo sites (Bennett 1950: 68-69; Kroeber 1930; Willey 1953). This represents a low-end estimate as extensive modern

[22] "Huancaco" is the term used within the Virú Valley for the Moche (see Collier 1950; Willey 1953).
[23] This site is designated "V-59" (Willey 1953).

agricultural development within the lower Virú Valley has no doubt destroyed many room blocks and small mounds (Moseley 1992; Personal observation 2007). No overall construction plan is evident in the placement of the major architectural elements (primarily rounded mounds[24]), but there may be a central north-south axis that orients the general length of the various mounded sites (Bennett 1950; Willey 1953).

The largest structure at V-59[25], Huaca Gallinazo, dates to the Late Formative Period, is made of solid adobe, and has a base that is about 60m x 75m. The summit of this structure is elevated 25m above the surrounding pampa and, as with Tomoval, algarroba beams were interspersed throughout as a means of stabilizing the huaca (Bennett 1950; Willey 1953). Surrounding this structure are ten additional mounds that also date to the Late Formative Period. These structures are considerably smaller, however, and appear to be the result of extended tell-like construction activity. All of the mounds sit atop a large irregular platform that ranges in height from 3m to 8m and appears to be made primarily of the remains of "underlying layers of abandoned and filled" agglutinated domestic structures[26] (Willey 1953).

Once correlated to changing ceramic types (see Bennett 1950; Strong and Evans 1953; Willey and Ford 1949), archaeologists were able to identify three different major phases of domestic construction at the Gallinazo Group (Early, Middle, and Late Gallinazo Period) that could be further correlated to changes in the domestic architecture. Houses in the Early Gallinazo Period were approximately 2.25m x 1.85m in area and were evidently entered through the roof (Bennett 1950). The walls of these early structures were made from tapia sections approximately 1.5m in length, 1.5 meters in height, and 40cm in thickness (Bennett 1950; Willey 1953). With an average square area of 2.5mx2m, Middle Gallinazo phase households were slightly larger than

[24] These mounds have become rounded due to erosion (Willey 1953).

[25] It should also be noted that recently Jean-Francois Millaire has begun an archaeological investigation at V-59. This project follows on his work at Huaca Santa Clara, located near the lower/middle valley neck on the south side of the Virú River (Millaire 2009). The Gallinazo Group project is on-going and initial results have yet to be published.

[26] Willey (1953) states that test pit excavations determined that the earliest level of the superimposed structures appears to be located at the level of the pampa.

earlier households and were still accessed through roof entries.[27] Willey (1953:134) notes that during this phase, "there was considerable experimentation in adobe types." All of these types such as ball, odontiform, hemisphere, subcone, and wedge-type were hand-shaped; however some mold-produced types begin to appear as well (Bennett 1950; Willey 1953). During the Late Gallinazo Period houses were entered through side-doorways (width = 50-60cm) and passageways connecting rooms begin to appear for the first time at the Gallinazo group (Bennett 1950; Willey 1953). Room size during this final Gallinazo phase ranged from about 2.8mx2m down to 1.4mx1.1m (Willey 1953). All rooms were constructed with either cane-marked or the slightly later plain brick, with only a few examples of stone construction noted (Bennett 1950; Willey 1953). Finally, the construction of adobe pyramids is associated with only the Late Gallinazo Phase, which is somewhat curious since adobe mounds were constructed at other Gallinazo sites throughout the valley during the Early and Middle Gallinazo Periods (Willey 1953).

Despite the above chronological differences in construction, some architectural canons were used consistently through all three phases of the Gallinazo occupation of V-59 such as agglutinated rooms (some of which were subterranean), hard packed floors made of clay placed on top of artificial fill, and pole and thatch construction used for roofing (Willey 1953). It is also of interest to note that during the Late Gallinazo Period, rooms that could be entered only through the roof were still being constructed, despite the fact that side-doorways were being used as entrances. Windows were never used at any time by the Gallinazo at V-59 (Willey 1953). Evidence of specialized spaces that were used at least periodically for public activities can also be found during the Early, Middle, and Late Gallinazo Phases, including the use of large rooms, or "courts," some of which were faced by elaborate brick work that formed complex geometric designs (Willey 1953; see also Bennett 1950). One such wall excavated by Bennett (1950) was 13.5m in length, 1.7m in height, and faced into a large open court (Willey 1953). Finally, burials within V-59 were rare for all three phases and when

[27] It is likely that the walls used to define domestic space were also used as "pathways of access" (Willey 1953).

encountered, were usually intrusive and dated to the Late Gallinazo Period, or even later.

In terms of sociopolitical organization, the settlement pattern and architecture associated with V-59 are instructive on many levels. In terms of the settlement pattern, Willey argued that the Gallinazo group was a "capital" located at the apex of a valley-wide system of sociopolitical organization that incorporated a number of satellite centers (such as Castillo de Tomoval) and platforms that were used to attract constituents and control specific sectors of the lower valley (Willey 1953). The construction and maintenance of large irrigation canals may have further linked the communities physically, symbolically, and politically, with each community's relative rank reflected at least partially in the size of its associated platform (Shimada 1994). The internal organization of spatial and architectural elements within the Gallinazo Group combined both residential and ceremonial activities (during the late phase of occupation) as evidenced by the close proximity of platform mounds and compound-based vernacular architecture (Willey 1953). Yet, despite the apparently politically centralized organization of sites throughout the valley, residential architecture within the Gallinazo Group has a highly "organic" look as it is made up of numerous agglutinated, non-standardized room units that form living blocks.

When compared, numerous differences between Jatanca and the Gallinazo Group are readily apparent. The architecture that makes up the bulk of the Gallinazo Group has an unplanned, almost organic layout, whereas Jatanca's urban core is made up of a numerous, replicated, well-planned compounds, the primary function of which was not domestic, but ritual (see Chapters 6, 7, and 8). In addition, access patterns within the site differ as many of the rooms that make up the earliest component of the Gallinazo Group compounds were entered through the roof. This pattern of access is not typically found within Jatanca where the use of direct and baffled entries between rooms was far more typical. However, roof-top entries were used in at least a few cases (see Chapter 5 – Compound I/Unit #5; see also Swenson et al. 2008, 2010). The architectural core of the Gallinazo Group appears to have been built-up over an extended period of time in an almost tell-like fashion resulting in complex super-positioning of vernacular architectural units. While some examples of below surface-level architecture, such as interior walls, have been identified within Jatanca (see Swenson et al. 2008, 2009, 2010; Warner 2006), for the most part, the core of the latter site is composed of architecture that rests upon sterile soil and appears to have been built within a short period of time. Finally the inhabitants of the Gallinazo Group extensively used stucco for wall decoration – especially on walls that were part of spaces that could have been used for public events such as ritual.

Despite these differences, there are several similarities between the two sites of note. Both sites were located within unprotected, open pampas and were surrounded by a network of irrigation canals and agricultural fields. Furthermore, both sites were made up of multiple nodes of large-scale architectural efforts. While it is true that the means by which these nodes developed (tell-like accumulation vs. planned construction) and the primary activities that took place within them (domestic habitation vs. ritual activity) differed, it is still noteworthy that prior to the construction of the central huaca at the Gallinazo group, both sites had replicated, discontinuous areas of decentralized repetitive activity. Also like Jatanca, the incorporation of large plazas into much larger architectural expressions is commonplace. Both sites used tapia as a major construction material. Jatanca used tapia throughout its occupation, while the Gallinazo Group used it primarily during the earliest phases of occupation. This shared use of material and associated construction technique may loosely link the occupation at Jatanca with the earliest occupational phase at the Gallinazo Group, with the subsequent extensive use of adobe bricks at Gallinazo marking a period of occupation that post-dates the abandonment of Jatanca. While it is a major focus of Chapter 4, it is worth mentioning here as well that the ceramics found at the two sites are remarkably similar – especially in terms of the stylistic treatment of the surface.

North Coast Architectural Trends: The Early to Late Formative Period

Despite their wide spatial/temporal distribution, there are a number of shared settlement and architectural features found within all of these Formative Period sites. For example, all were relatively large when compared to other contemporaneous settlements within the same general area, likely indicating that they were regionally important centers, perhaps serving as regional administrative centers or places of ritual importance (see Chapter 3). With few notable exceptions (i.e. Cerro Arena), the central core, composed of monumental architecture was relatively approachable – especially when compared to later North Coast sites such as Pacatnamú (Donnan and Cock 1986), Pampa Grande (Shimada 1994), Je-125 and Je279 (Swenson 2004) all of which were enclosed by a substantial series of walls. However, this "openness" at the level of the site stands in stark contrast to the lack of "approachability" of the interior of Formative Period monumental architecture, where entry was discouraged through the use of constructed features such as baffled entries, diminishing door widths, and obscured sightlines. Finally, with the exception of only the earliest examples (i.e. Puemape) most of these sites were associated with extensive systems of irrigation infrastructure which implies the presence of a considerable amount of agricultural activity. That canals and *surcos* surround these early large sites likely indicates that irrigation-based agriculture played a large role in the early stages of North Coast urban development (Moseley 1975, 1982).

While the above might make it appear as though most of the Formative Period sites have an achoritic settlement pattern (Rowe 1963), this might not be the case. Lower valley sites such as Purulén, Puemape, Cerro Arena and The Gallinazo Group are all located within barchan dune fields which could easily obscure associated outlying settlements, specialized points of environmental extraction (i.e. villages of fisherfolk), and/or satellite farming communities. In addition, subsequent culture groups such as the Moche and the Chimú (see Chapter 6) irrigated the pampas that surround these sites which may have destroyed any evidence of small-scale human activity associated with Formative Period farming settlements (Dillehay 2001; Dillehay et al. 1998, 1999, 2000, 2004; Kosok 1963; Moseley and Deeds 1982). We can say a bit more about other Formative Period sites such as Huaca de los Reyes (Pozorski 1982) and Monte Grande (Tellenbach 1986), as they are located in dune-free areas, and/or did not see extensive post-Formative Period agricultural production. In the case of Huaca de los Reyes, Pozorski (1982) reports that despite his intensive survey of the general area, he did not encounter any other settlement activity that dated to the Middle Formative Period, which might indeed indicate the presence of a more achoritic settlement pattern at this particular Moche Valley site. At Monte Grande, however, Tellenbach (1986) noted the presence of numerous additional sites throughout the Middle Jequetepeque Valley that dated to the Early Formative Period – a situation confirmed by survey work conducted by Ravines (1982, 1985) and Dillehay and Kolata (Dillehay et al 1998, 1999, 2000, 2009). While it could be argued based upon the distribution of architectural and ceramic data that Monte Grande had a predominantly synchoritic settlement pattern, this idea was never specifically tested (see Tellenbach 1986). Nonetheless, that the settlement associated with Monte Grande was generally synchoritic in nature seems highly plausible.

When considering the architectural core, most of the above sites, such as Monte Grande, Kuntar Wasi, and Huaca de los Reyes had a single artificially constructed visual focal point of monumental scale that was composed of the same general architectural features such as rectilinear forms, enclosed plazas, changes in elevation, the use of stairs as a means of vertical transition, implied linear patterns of movement, and a bi-lateral layout around a central axis. The sequence in which these features occur is also similar. For example, one tends to increase their elevation as they move from the entryway into the structure's interior. As one proceeds further into the bilaterally-organized interior, stairs and entryways tend to narrow and plazas tend to decrease in area. The overall effect of this ordered combination of architectural features is to discourage casual interior passage (see Moore 1996). In addition, it could be argued that the linear arrangement of these architectural features "encouraged" those permitted to pass into the architectural interior to stay within the central axis area -

although other less formal paths of locomotion within the complexes were possible (see Moore 2006). Finally, space on the summit of the mound is generally subdivided into a series of rooms, the configuration of which often form a general "U" shape that opens into the below plaza (or plazas) area.

It is also of interest to note that typically the elevational changes associated with early North Coast monumental architecture was organized so as to control sightlines (see Higuchi 1989; Moore 1996). For those passing into the interior of a monumental construction, terraces, walls, and ancillary structures made of both durable and non-durable materials were employed in part to restrict the pedestrian's visibility as to what lay ahead on the path. Elevational differences between the plazas and associated summit also interrupted sightlines and permitted those on the top of the large, truncated mound to remain out of view of spectators located within the sunken plaza (or plazas), in much the same way that a backstage area provides privacy for an actor waiting for their cue (Inomata and Coben 2006; see Chapter 7).

In addition to the above settlement patterns, architectural features, and organizational concepts that remain somewhat consistent through the Formative Period, there are some noteworthy changes as well. One of these changes is site population. In general, sites tended to get larger through time. As measured by architectural area, the initial Early Formative Period settlement at Puemape was much smaller than those associated with Late Formative Period sites such as Jatanca (see Chapter 3), or the even later Gallinazo Group, which may have had a population of perhaps 30,000 people (Bennett 1950). Along with an increase in population, there appears to have been a weak trend toward the construction of larger examples of monumental architecture during the Formative Period, setting the stage for subsequent developments in the massive Moche sites and associated huacas during the Early Intermediate Period (Bawden 1982, 1996; Chapdelaine 2001; Gálvez and Briceño 2001; Shimada 1994; T. Topic 1982; Uceda 2001; Uceda, Mujica, and Morales 2004). Finally, despite the presence of a primary monumental construction that likely served as a site's visual point of focus, there is a general trend that favors the construction of additional monumental buildings within the site's core that could also have served as a physical backdrop for the replication of activities associated with ritual, politics, feasting, performances, etc….

With regard to specific architectural canons, by the Late Formative Period, the use of U-shaped structures and features, once commonly used during the Early and Middle Formative Period, had largely disappeared[28]. In addition, stairs, the primary means of negotiating changes in elevation within monumental architecture during the Early and Middle Formative Periods, become less common during the Late Formative Period, and are phased out in favor of ramps at sites such as Jatanca (see below and chapter 6) and Tomoval (Willey 1953). For the most part, the relative visibility of nested plazas tends to decrease over time (see Chapter 6). During the Early Formative Period at sites such as Monte Grande and Kuntur Wasi, the initial plaza was largely wide-open and was not surrounded by an exterior wall. Furthermore, the secondary plaza and much of the summit were also largely visible to those that surrounded the huaca. During the Late Formative Period, however, plazas and the activities that were being conducted within them became far more private as demonstrated by those associated with the Gallinazo Group and at Tomoval (the "Sunken Room"), which were defined by, and obscured behind high walls (Bennett 1950; Willey 1953).

Sociopolitically, it could be argued that many of the architectural configurations examined in relation to monumental architecture indicate that there were hierarchically organized differences in status. While Brennan (1980, 1982) argues that these gradations in status at Cerro Arena were complex and highly nuanced, evidence for this subtle pattern could not be found at all of the above sites. Nonetheless, it could be argued that many of the monumental constructions indicate that there were at least some gradations of status reflected in (and reified by) differential architectural access. Furthermore, as a general pattern, vernacular and ritual architecture were found in close proximity to each other, perhaps underscoring the idea that religious specialists

[28] U-shaped architectural forms, however, will reappear in the form of the *audiencia* during the Late Intermediate Period – especially at the North Coast site of Chan Chan (see Chapter 9).

and ritual activity played at least some role in site-wide sociopolitical organization (Pozorski 1980; Tellenbach 1986).

At this point, it is instructive to analyze the spatial and architectural arrangements of Jatanca (Middle to Late Formative Period) in light of the above developments. As with the sites described above, Je-1023 was relatively large when compared to other surrounding contemporary sites, and could have served as a regional administrative center for those occupying the southern lower Jequetepeque Valley (Dillehay et al 2009). Numerous much smaller Formative Period sites can be found throughout the southern portion of the valley – especially within the upper lower valley (Dillehay et al 2009). Some of these sites could have been used as points of key resource extraction that provided important raw resources utilized in the construction of Jatanca, such as reeds for the manufacture of roofs, or marine resources for household consumption (see also Chapter 3 and chapter 5). That these raw resources were perhaps seen as critical to North Coast life can be further inferred by the amount of reoccupation that occurred after the Formative Period – especially by the expanding Chimú empire (Dillehay et al 2004, 2009).

In terms of its geophysical location, like other Formative Period sites, it appears as though a premium was placed upon occupying land that was amenable to irrigation agriculture. Indeed, all indications are that Jatanca was very much a farming community instead of being predominantly a ritual, pilgrimage, or trade center. The concentric ring of debris that surrounds the site and that indicates the presence of a large support population is generally made up of simple utilitarian ceramics, grinding stones, and grater bowls, which can be interpreted as further evidence of Jatanca's constituents' generally agrarian focus.

In turning our attention to comparing specific aspects of architecture, like many other Formative Period sites, Jatanca is relatively approachable as there are no contemporary walls that would impede access into the architectural core (see Chapter 3). Despite the presence of numerous large compounds, Je-1023 also has a single architectural feature (the elevated Acropolis) that could have served as a primary focal point or "iconic" structure for residents. Furthermore, the Acropolis and the major compounds (Compounds I-IV) are constructed using typical Formative Period architectural canons such as rectilinear forms, enclosed nested plazas, changes in elevation, the use of stairs as a means of vertical transition (Acropolis, Compound II, Compound III), implied linear patterns of movement, and a bi-lateral layout around a central axis. The sequence in which these features occur is also somewhat similar: large plazas are fronted by elevational changes. Furthermore, one tends to increase their elevation as they move from the entryway into the structure's interior. As with earlier examples of monumental architecture, interior access at Jatanca's compounds is also discouraged. Whereas Early and Middle Formative Period sites used decreasing stairway/entry widths and obscured sightlines to discourage interior passage, Jatanca's architects tended to use baffled entries along with a slight decrease in door width to achieve the same affect (see Chapter 6). However, it should be remembered that sightlines within the PRPC were also quite important in terms of the overall interior design (see Chapter 7). To conclude, in many respects, Jatanca fits in well with regard to the general appearance of Formative Period space and architecture.

When examining dynamic aspects of space and architecture during the same period along the North Coast, Jatanca – located near the end of the above discussed developmental spectrum – fits well with the general architectural trends of the Late Formative Period. For example, Jatanca is much larger than the earlier nearby site of Puemape, or other Formative Period sites within the valley (Dillehay et al 2009). In addition, the Acropolis is much larger in terms of volume than is the platform at Puemape (Elera 1998; Elera and Pinilla 1990). Also, while the Acropolis likely served as a community-wide focal point, Je-1023 is also composed of numerous large compounds that are monumental in their own right and served as replicated points within which sacred and secular activities could have taken place (see Chapters 6, 7, and 8). Also typical of the latter end of Formative Period architectural development, formerly popular architectural tropes such as U-shaped structures and features are also absent within Jatanca's architectural core. However, it is of special interest to note that stairs were incorporated within the interior of the Acropolis and Compounds II, III, and V (see Chapter 6). Two occurrences of stairs are especially interesting as they were apparently used in conjunction with ramp-architecture as well. In the main plaza of the Acropolis, a north-focused set of stairs sits adjacent to a ramp with both providing a means of accessing the same platform (see Figure 2.7 - see also Chapters 6, 7, and 8). The second example of stair/ramp co-occurrence is found within Compound II. In this case, stairs have been directly incorporated into the lower portion of three ramps (see Figure 2.8 - see also Chapters 6, 7, and 8). Two of the stair ramp features face to the east, while the 8third faces the south. It is tempting to see both of the above examples as representing a brief transitional phase between the construction and use of stairs (Early-Middle Formative Period) and ramps (Middle to Late Formative Period). Finally, the general trend of reducing the visibility of plazas reaches an apex at Jatanca where any activities conducted within nested plazas are made invisible by high surrounding walls and baffled entries. Indeed, plaza activities are invisible to those not standing within the interior.

Figure 2.7 - Stairway and Ramp (facing southeast), and Stairway (facing east)

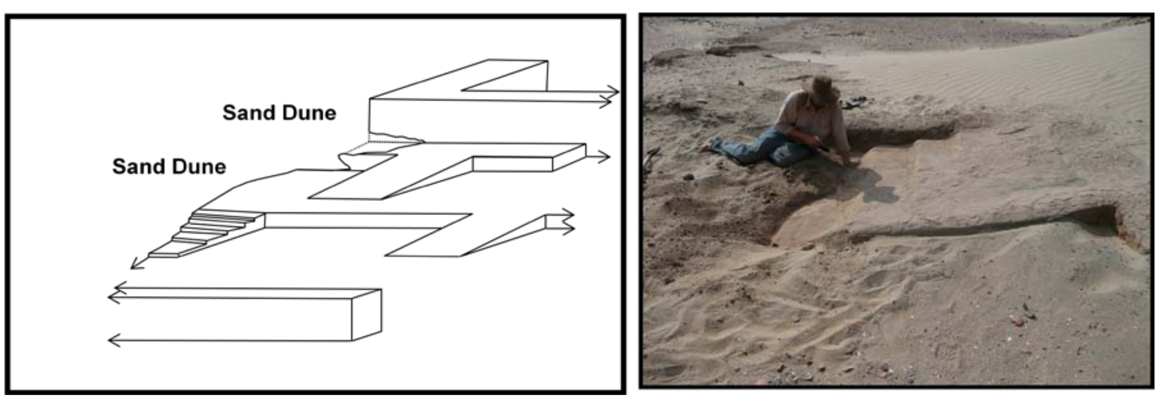


Figure 2.8 - Stair/Ramp Features (facing north, and facing southwest)

In addition to these similarities with other Late Formative Period sites, there are also some regional variations in architecture that characterize Jatanca. For example, interior courts at the Gallinazo Group are decorated with elaborate geometric patterns made of tapia-like material. The plazas within Jatanca, however, are devoid of such decoration. Furthermore, the large-scale architecture that forms the bulk of the Gallinazo Groups' core is made up of vernacular structures informally arranged in a continuous "honeycomb" pattern (Bennett 1950), whereas the compounds that make up the bulk of Jatanca are not the result of vernacular activity, but are well-planned, formally constructed buildings (Warner 2006; see also Chapter 6). Evidence such as the above indicates that despite the general similarities in spatial/architectural organization among Formative Period sites, intra-valley architectural differences were still present – even among relatively contemporary sites.

These spatial/architectural features and trends at Jatanca and other Early to Late Formative Period sites along the North Coast may indicate a number of interesting sociopolitical and economic developments that might support the presence of incipient, or proto urban conditions. For example, in general, site populations tended to increase through time, a condition perhaps made possible by developments in irrigation agriculture that were capable of supporting large, nucleated populations within the lower valleys somewhat independent of marine yields (Moseley 1975; see also Chapter 3). The presence of restricted access into monumental architectural as measured by the series of baffled entries and nested plazas that become smaller in area as one proceeds into the interior, might indicate that there was also a heightened trend toward social differentiation occurring during the Formative Period as well. Again, Jatanca, with its high walls that obscured all plaza activity from those who were not within the interior, is representative of this trend (Chapter 6).

Yet one must be careful to not conflate a trend toward increased social differentiation with sociopolitical centralization. In fact, the multiplication of replicated areas that were suitable for ritual and political activities within Late Formative Period sites such as the Gallinazo Group and Jatanca may indicate that sociopolitical organization was not necessarily undergoing a steady process of increasing centralization as argued by some (see Feldman 1985, 1987; Pozorski 1980, 1982). In fact, the presence of four largely contemporaneous, replicated compounds within the architectural core of Je-1023 (Compounds I-IV), might better-indicate that political power within the site was more dispersed, with each compound retaining at least some relative autonomy over its neighboring compounds (see Chapter 8).

Finally, two other criteria that have been used to identify the presence of an urban community, craft specialization and ethnic diversity, are also largely absent from Jatanca. Based upon surface (see Chapter 3), ceramic (see Chapter 4), and excavation data (see Chapter 5), the population of Jatanca appears to have been composed of individuals who were associated with largely agrarian activities during the majority of any given year. No large-scale ceramic production facilities, food processing areas, or caches of trade goods (raw or finished) that might directly indicate the presence of craft specialists have been found to date (Swenson et al. 2008, 2009, 2010; Warner 2006; see also Chapter 6). In addition, architectural and ceramic analyses (see Chapter 4) have not revealed the incidence of either any "barrios" or "exotic" ceramics that might indicate the presence of heterogeneous ethnic divisions within Jatanca's permanent population, or associated specifically with any of the major compounds.

To sum: In examining the above comparative settlement and architectural data, numerous points can be made.

1. Changes in local environments could cause radical restructuring, and/or anticipatory responses in settlement patterns and agricultural infrastructure.
2. In terms of monumental architecture, there is quite a bit of continuity in shared features and spatial organization among Formative Period sites across time and space.
3. Yet despite this continuity, there also appear to be some valley-specific settlement and architectural developments.
4. Access patterns associated with monumental architecture are generally restricted and become increasingly so over time.
5. In general, patios and plazas became more private over time.
6. There is a general trend for Late Formative Period sites to incorporate examples of replicated monumental architecture into the site core.

The above points are explored further in the subsequent chapters of this dissertation.

Conclusion

As the background chapter to the dissertation, Chapter 2 has a broad breadth. It has provided necessary fundamental information in three key categories: theories behind urban development – especially within the Andes; an examination of both the regional and valley-specific environment; and the development of settlement and architectural trends associated with important North Coast Formative Period sites – especially as they compare to available data from Jatanca.

Clearly, numerous ideas behind the identification of and processes responsible for urban conditions have been proposed over the last 60 or so years. While Jatanca itself is not an urban center, it is a part of the regional developmental sequence and therefore, can tell us something about the growth of urban conditions at later North Coast sites such as Huacas Moche/Sol (Chapdelaine 2001), Pacatnamú (Donnan and Cock 1986, 1997), and Chan Chan (Moseley 1982). In addition, given Jatanca's size relative to other nearby contemporary sites; geophysical location within the center of an open pampa suitable for irrigation agriculture; and direct association with a complex series of canals, evidence from Jatanca may indicate that the development of irrigation agriculture was an important step in North Coast urban development (Moseley 1975; see also Chapter 3). No doubt, Jatanca was one of many agriculture-based Formative Period sites along the North Coast (Moseley 1975). Likewise, local environmental conditions such as the cessation of predictable water flow from the Quebrada Cupisnique and subsequent dune migration may have played a critical role in the subsequent abandonment of Jatanca – despite some 500 years of apparently continuous occupation (Dillehay and Kolata 2004; Dillehay et al. 2004; see Chapter 3 and Chapter 5).

Subsequent chapters will demonstrate that while Jatanca was not an urban site by much of the above-discussed criteria, it along with other Formative Period sites such as those in the Casma Valley (S. Pozorski and T. Pozorski 1987, 1992), may have played an important role in the development of subsequent North Coast urban architectural forms during the Late Intermediate Period. Indeed, it will be argued that the revitalization of compound-style architecture utilized some 700 years later at Chimú sites such as Quebrada del Oso (Keatinge 1974) and Pampa Mocan (T. Pozorski 1987) in the Chicama Valley, and Chan Chan in the Moche Valley (Day 1982) were in part the result of a desire to manipulate social memories and create visible ties to the distant (and therefore malleable) past. By doing so, a sense of long-term sociopolitical stability could be created, despite the social upheaval that marked the beginning of the Late Intermediate Period (see Chapter 9). Therefore, the uncanny resemblances between Chimú compounds and the much earlier compounds of Jatanca are not accidental, but were based upon active decisions (both strategies of forgetting and acts of remembering) made within a complex matrix of social memory that extended back into the Formative Period (Bevan 2006; Connerton 1989; see also Chapter 9). Therefore, Jatanca's contribution to North Coast urbanization is not just that of a link in a long chain of complex social processes that resulted in widespread sociopolitical reorganization of an entire region, but can also be found within the architectural canons of later monumental expressions. Before this can be demonstrated, however, it is necessary to discuss typical archaeological data sets such as settlement patterns, ceramics, and excavation results.

Chapter Three: The Hinterland Survey: Mapping, Description, and Analysis

This chapter describes the pedestrian survey and mapping activity conducted during the 2004/2005 field season within the Pampa Mojucape. This survey digitally recorded all of the constructed features located within the pampa (e.g. walls, irrigation canals, *surcos*[1], cemeteries, etc.…) and attempted to place their construction and use relative to activities at Jatanca, Huaca Colorada, and Tecapa (see Chapter 2). This extensive phase of data collection was deemed imperative for numerous reasons. As discussed in Chapter 2, defining the form and layout of the settlement pattern associated with a given site is an important step in examining the total urban process and socio-spatial condition (For example, see Rowe 1963). Without data from the surrounding countryside, it would be impossible to discuss urban (or proto urban) issues such as site organization (i.e. achoritic, synchoritic; see also Chapter 8); the presence of sociopolitical ties with other nearby communities; the organization of irrigation activities within the surrounding hinterland; or how the surrounding countryside was exploited in order to sustain local populations. These data are also compared to settlement systems identified in other North Coast valleys such as the Gallinazo Group and Mocollope. A final reason for undertaking such a massive survey is that modern-day agro-industrial developments threaten to eradicate all evidence of prehistoric activity upon the Pampa Mojucape.[2]

Prior Jequetepeque Valley Survey Work

Gordon Willey's (1953) groundbreaking work in the nearby Viru Valley demonstrated effectively to archaeologists that valuable data could be generated via a valley-wide survey. Concentrating on settlement and architectural data, the results of

[1] Surcos are relic agricultural fields.

[2] During the 2009 field season, project members were approached by several officials from Lima who were in the area looking for the "best place" to put a road across the Pampa Mojucape. This proposed road will run from just south of San Pedro de Lloc to San José, effectively cutting out the loop of the Pan American Highway that runs past Pacasmayo. The construction of this road would devastate the pampa and have an adverse impact upon Jatanca as well.

his work (and others on his team) provided scholars with a region-wide perspective related to many aspects of culture change, thereby encouraging other scholars to undertake similar surveys in adjacent North Coast Valleys. However, whereas the Viru Valley is relatively small, many of the other North Coast valleys, such as the Jequetepeque Valley, are large[3], making a complete pedestrian survey an expensive and time-consuming pursuit.

Nonetheless, over the intervening fifty-years or so since Willey's work in Virú Valley, the Jequetepeque Valley has been the locus of numerous archaeological surveys which have ranged in scope from those that targeted specific regions of the valley (Ravines 1982a, 1982b) to valley-wide surveys (Dillehay et al. 1998, 1999, 2000, 2001, 2009; Eling 1987; Hecker and Hecker 1990). Three recent valley-wide survey efforts are especially noteworthy as they covered the southern portion of the Jequetepeque Valley: Eling (1986, 1987), Hecker and Hecker (1990), and Dillehay et al. (1998-2001, 2010).

Herb Eling, a former student of Richard Schaedel, used a combination of aerial photographs and pedestrian/automobile survey to gather data for his dissertation (1987; but see also 1986). Eling focused primarily on irrigation canals and "large site" chronology building via the collection and analysis of surface ceramics as a means of examining issues related to the development of irrigation agriculture.

A major contribution made by Eling was the use of time-lapse aerial photo sequences in analyzing the speed at which dunes moved across the open pampas in the southern valley, integrating this information into his settlement pattern analysis[4]. However, the valley-wide ceramic sequence (especially as it relates to domestic ceramics) was not as refined as it is today (for example, see Donnan 2009; Swenson 2004), which limited his ability to accurately affiliate specific sites with the broader chronology of North Coast development. In addition, not all of the smaller sites, roads, irrigation canals, ceramic scatters, or *surcos* were recorded by Eling due perhaps to the

[3] According to Moseley (1983), at 4050km2, the Jequetepeque Valley's catchment basin is one of the largest river valleys within the Peruvian North Coast.

[4] Eling used four different sets of aerial photographs: May 1943 (*Servicio de Aerofotográfico*); June 1948 (United States Air Force); December 1961 (United States Air Force) and May 1968 (*Servicio de Aerofotográfico*).

use of largely opportunistic aerial photo analysis – a fact confirmed by subsequent survey work both within the broader valley (Dillehay et al 1998, 1999, 2000) and the Pampa Mojucape (Warner 2006). Despite these issues, Eling (1986, 1987) identified hundreds of key features within the valley (some of which have since been destroyed), attempted to organize them in a chronologically meaningful way, and examined valley-wide culture dynamics, tending to focus upon later cultural developments.

Wolfgang and Ursula Hecker, both of whom were students of Ubbelohde-Doering, also relied upon aerial photos and undertook a survey of the Jequetepeque Valley (1990). While their survey was also valley-wide, it focused upon the identification of habitation sites – primarily through the recognition of standing architecture. Therefore similar to Eling, some of the smaller, more ephemeral sites were not located during the course of their work. Finally, many of the smaller features not affiliated directly with a site such as irrigation canals, *surcos*, road segments, *yardangs* and ceramic scatters were missed, resulting in the impression that the Jequetepeque Valley hinterland is relatively "empty." However, despite these deficiencies, their work resulted in the identification of several sites and features that had gone previously undetected. In addition, until recently, their 1990 map was the best available to archaeologists interested in the extensive, valley-wide site patterning of archaeological sites within the Jequetepeque Valley.

In 1997, Tom Dillehay and Alan Kolata initiated a multi-year survey program, *Proyecto Pacasmayo*, the objective of which was to study human and environmental interaction through time and space[5]. To meet these goals, a total valley-wide pedestrian survey was undertaken that recorded all pre-historic sites (Preceramic through Historical) and associated features from approximately San José de Moro in the north to the Quebrada Cupisnique in the south. This survey extended up into the lower middle valley as well, reaching as far east as the modern-day town of Ventanillas. Unlike previous surveys, Proyecto Pacasmayo conducted all survey on foot and

[5] I was a member of this project and participated in the surveys during the 1997, 1998, and 1999 field season. Furthermore, work for this dissertation (*Proyecto Jatanca*) was undertaken under the aegis of *Proyecto Pacasmayo* and supervised by Dr. Tom Dillehay

attempted to record all sites and features irrespective of size. Therefore, ephemeral features that had been previously missed by other surveys, such as Preceramic lithic scatters, small habitation clusters, and ceramic scatters were recorded for the first time. To date, this survey has resulted in the presentation of numerous *informes* (Dillehay et al 1998, 1999, 2000), articles (Dillehay 2001; Dillehay and Kolata 2004; Dillehay et al 2004) and books (Dillehay et al 2009). This dissertation is also an off-shoot of survey and excavation work initiated by Dillehay and Kolata.

As a total pedestrian survey that recorded all human-made features, Proyecto Pacasmayo compiled the most detailed regional archaeological data set and valley-wide map to date within the Jequetepeque Valley (Dillehay et al. 2009). While the resulting maps and chronological data generated from Proyecto Pacasmayo shed critical new light on the relationship between agricultural features and sociopolitical organization (Dillehay 2001; Dillehay and Kolata 2004, Dillehay et al. 2004, 2009), the spatial relationship between each individual site and its outlying features was controlled largely through the use of hand-held GPS units and mapped expediently, resulting in perhaps less site-specific spatial precision than might be desired.

All three of the above Jequetepeque Valley projects provided important information related to the dynamic settlement pattern within the lower valley. One of the key things that differentiated this dissertation project from those above, however, is that this project mapped a much smaller area and as a result, was able to collect data within the study zone in much greater detail than prior valley-wide efforts.

Pampa Mojucape Settlement Survey: Objectives, Methods and Tools

The objective of the dissertation survey was to record in as much detail (as time permitted) the Pampa Mojucape area for the purpose of being able to: 1) define the extent of visible surface features related to prehistoric activity so as to provide a broader context for architectural developments; 2) identify the chronological relationships of surface remains so as to expediently date hinterland activity; and 3) and define the extent of agricultural activity on the Pampa. It was hoped that by recording all of the disjointed small canal segments, *yardangs*, *surcos*, and domestic scatters located throughout the pampa, that these features could be later linked into a more or less continuous network and provide information related to the extent of the irrigation agriculture and the density and location of occupation within the area. Ultimately, it was hoped that the resulting maps and data could be used to examine the social aspects of Jatanca's settlement pattern such as the permeability of the sites architectural core; the degree to which it was an achoritic or synchoritic site (Rowe 1963); the sociopolitical incorporation or relationship with any nearby communities; the organization of irrigation activities within the surrounding hinterland; or how the surrounding countryside was exploited in order to sustain Je-1023's agglutinated population. In addition, these data could be used to examine Late Formative Period settlement activity from sites within other nearby North Coast valleys – especially those that have undergone recent publication (Attarian 2009; Millaire 2010). Finally, modern-day agro-industrial developments threaten to eradicate all prehistoric activity upon the Pampa Mojucape, further necessitating the creation of a set of maps that can be use by future scholars.

The methodologies, data collection, and display techniques employed to meet these goals were standardized before the start of the project so as to minimize the need to modify procedures once mapping in Peru had been initiated. All hardware and software (GPS Pathfinder Office - Version 2.8) was used extensively at the University of Kentucky and tested under a number of conditions so as to better understand how it would respond under similar conditions, both in the field and the remote laboratory. All field forms were created before leaving for Peru in early July of 2004. Once in Peru, aerial photos and topographic maps were purchased from the Peruvian Air Force and the Institute of Geology before leaving Lima for Pacasmayo. Once in the field, notes and ceramic drawings from the 1997, 1998, and 1999 survey seasons were reviewed. During the 1997 and 1999 field seasons, Proyecto Pacasmayo conducted both survey and excavation within the Jatanca area. This prior activity resulted in the acquisition of ceramic samples, radiocarbon dates (see Dillehay and Kolata 2004 – Table 1) and excavation profiles, all of which were invaluable to this project.

Three primary tools were used to map the Pampa Mojucape: aerial photos, a Trimble GPS, and a hand-held Garmin GPS. The aerial photos were used to organize and provide expedient reconnaissance for each day's work. At times, pre-survey examination of aerial photos revealed the presence of features such as subtle feeder canals that would have been difficult to spot initially from ground-level. Since the photos were taken some forty-years earlier, in some cases, they also indicated the presence of features that were subsequently obscured by shifting sand during the fall of 2004, or had been destroyed by modern agriculture. In addition, oblique aerial photos published by Ubbelohde-Doering (1966) of the Jatanca compounds were also consulted so as to make minor corrections to architectural data.

The Trimble GPS is a portable unit that makes extremely accurate maps based upon terrestrial triangulation established by a series of satellites in synchronous orbit around the Earth. Conceptually, the Trimble is a fairly simple machine as it detects geographic location in horizontal and vertical space and, on demand, records data in point, line, or area format. When confronted with a feature during survey, one specifies to the Trimble what kind of data to record. Therefore, long linear features such as canals, walls, or a mountain base were mapped as lines; domestic scatters, lakes, *surcos*, and *yardangs* were mapped as areas; and small (less than two meters in diameter) features of archaeological interest as points. In general, the more satellites the Trimble can find, the more accurate are the resulting maps. Given the largely unobstructed view of the North Coast sky, the Trimble was able to pick up satellites with relative ease, resulting in maps accurate within about .5m, and often much less when recording stationary points. The Trimble was slightly less accurate when recording linear features, but was still generally accurate from day-to-day to within a meter or two. Vertical data were also collected, but not used for this dissertation as, unlike horizontal data, vertical data was not nearly as replicable on a day-to-day basis and, therefore, deemed unreliable. All data was collected in UTM grid-coordinate system and uploaded daily as an attachment to an on-line storage account for safekeeping.

The handheld Garmin GPS (Model = GPS 72) was used to establish a daily grid (generally 25 meter transects, but where visibility allowed, a 50 meter grid was also used – especially in areas that had undergone sheet erosion) that was used to guide the pedestrian survey. The handheld unit was also used to keep track of completed survey areas, record the location of all surface collections, and expediently mark areas for future mapping with the Trimble.

Survey and Trimble mapping was conducted within a pre-targeted area spatially controlled by the handheld GPS and aerial photographs in order to identify and map features of varying size. Due to time constraints, all features were treated in a triage-like manner with those that revealed the most information given priority over those that would have a lesser impact on the resulting maps. In other words, mapping large main-line canals was completed before moving on to branch canals, which were mapped before even smaller feeder canals. As a general rule of thumb, small features such as dispersed ceramic scatters less than 2m in diameter, or narrow feeder canals less than one meter in length were generally not mapped due to issues related to time, the quality of information returned, and the resolution of the feature itself relative to the broader study area. Hierarchically prioritizing the recording of features was especially important in light of the fact that this project had an initial goal of mapping close to 9,000 hectares within the Cañoncillo area. When using the Trimble, the time of day during which maps were made with the Trimble was also an issue as subtle details such as *surcos* and feeder canals were far more visible in the early morning or late afternoon due to the lower angle of the sun casting a longer, more definitive shadow. As a result of this differential visibility, there were occasions when new features were discovered while surveying in the morning within areas that had been previously surveyed in the afternoon. Therefore, areas with agricultural potential were always surveyed in either the early morning or late afternoon.

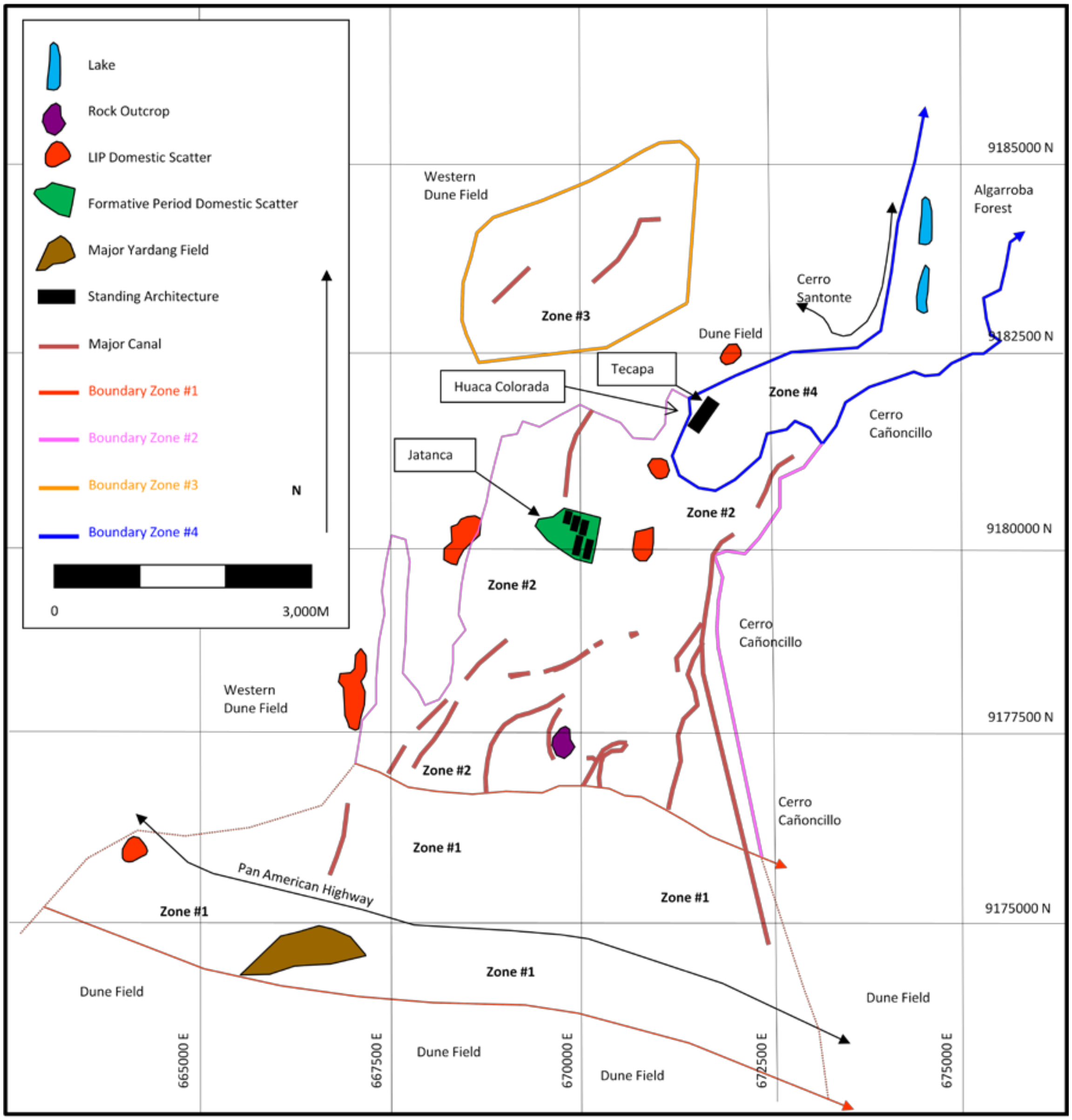
The local taphonomy of the Pampa Mojucape always played a considerable role in Trimble-based data collection. Prevailing winds have obliterated vast stretches of the largely unprotected pampa and reduced archaeological visibility throughout the region by eroding walls, irrigation canals, *surcos*, and so on (see Chapter 2). The reverse is also true: In some areas, such as that immediately surrounding Je-1023, soil deflation caused by the winds has resulted in too much archaeological visibility. Sherds within this area have been mixed and directly super positioned – despite being separated in use by hundreds of years (see Chapter 4). In addition, barchan dunes, stationary dunes, and continuous dune fields also cover considerable stretches of the pampa (see Chapter 2).

Despite these shortcomings, maps of the Pampa Mojucape produced by this project could be used to examine the myriad of spatial relationships between human-made and natural features. Some of the maps created during the regional survey include those that detail the boundary and various zones of the pampa, along with the relationship of constructed features to each other. These results, are elaborated upon in the below sections.

Defining the Overall Boundaries of the Cañoncillo Survey Area

The boundaries of the study area (Figure 3.1) were arbitrarily demarcated by features such as mountain bases, stationary dune fields, and destruction due to modern-day agricultural activity – especially to the west of the Pampa Mojucape. Understanding the composition of these borders is important toward understanding the current ecological conditions of the zones that make up the Pampa Mojucape. In addition, the boundary lines are an integral part of the study area, and the way in which they were defined also provide greater insight into the taphonomic diversity of the study area. Therefore, the geophysical make-up of the major boundaries is presented in detail.

Figure 3.1 – Map of Study Area (All features depicted were not used contemporaneously)



Southern Boundary: Dune Field

The southern boundary of the study area (Figure 3.1) is formed by the presence of an almost continuous accumulation of low-lying sand dunes that run parallel to the Pan American Highway. Given the distinctness of the north edge of this feature, there can be little doubt that its presence is the result of the relatively recently constructed highway, which forms a low windscreen within which air-born sand falls to the ground (see Chapter 2). Unfortunately, while this continuous bed of sand is not particularly deep (<1m in general) it does obscure many of the low-lying agricultural features such as canals that run through this zone. Beyond this to the south, the pampa has been badly eroded due sheet erosion pouring out of the mouth of the nearby Quebrada Cupisnique. While there is little doubt that much of this gently sloping area contained agriculture fields in the past, this information has been largely destroyed. Therefore, due to multiple factors of diminishing visibility, it was determined that the north edge of the continuous low-lying sand accumulation would mark the southernmost boundary of the study area.

Western Boundary: Modern Agricultural Development

The western boundary of the study area is marked by the nearly continuous distribution of modern-day agricultural activity stretching from San Pedro de Lloc in the south, up to San José in the north. Interspersed throughout this area are numerous pockets of deep sand and stationary sand dunes that also obscure portions of the western edge of the study area. These dunes average between 6m to 10m in height and are often covered with low-lying, scrubby vegetation that acts to partially stabilize the dunes. As one walks from the center of the pampa toward the western boundary, the stationary dunes blend together into a continuous bed of sand that is intermixed with abundant evidence of human occupation including ceramics, marine shell, short canal segments, and *surcos*, which are generally poorly preserved due to water and wind erosion. A few low-lying *yardangs* (see Chapter 2) are also found within the western border area. However, these are not nearly as large as those located to the south of the

Pan American Highway, just beyond the limits of the Southern Boundary (Figure 3.1). Small feeder canals and some *surcos* are found on the surface of a few of these *yardangs*. Ceramics found on the surface of these *yardangs* indicate that these feeder canals were likely used during the Late Intermediate Period.

Northern Boundary: Modern Agricultural Development

Numerous features, both man-made and natural, such as contemporary agriculture associated with the towns of San José, Santonte, and Santa María; the southern edge of Cerro Santonte; and the algarroba forest that surrounds the Late Intermediate Period/Late Horizon site of Tecapa (see below) periodically form part of this arbitrary boundary. In general, archaeological visibility along this northern edge is poor.

Eastern Boundary: The Cerros and Quebrada Cupisnique

The easternmost boundary of the study area is the most “fixed” throughout prehistory, as it is made up of both the base of both Cerro Prieto Espinal and Cerro Cañoncillo in the north, and the washout associated with the Quebrada Cupisnique to the south[6]. Canal 1 (Figure 3.1), the largest canal within the pampa, is the easternmost of the large canals originating along the face of Cerro Cañoncillo and was used as an arbitrary marker of the southern portion of the eastern boundary.

Defining the Sectors of the Pampa Mojucape Survey Area

Based upon the distribution of internal archaeological features, modern-day environmental conditions, and the above discussed exterior boundaries, maps created

[6] While the Quebrada Cupisnique does not generally carry water today, based upon work by Dillehay and Pino, it seems highly likely that it did in the past – probably up through ca. 400-500ACE – and could have been the source for canal water diverted into Jatanca (Dillehay – Personal Communication 2010). Furthermore, as observed first-hand by the author, the Quebrada Cupisnique is capable of collecting and disgorging tremendous amounts of water during ENSO events. During the aftermath of the 1998 ENSO, portions of the Pan American highway located to the immediate south of the quebrada were washed away and would not be replaced for at least one year.

via the pedestrian survey as recorded by the Trimble resulted in the identification of four arbitrary zones within the Pampa Mojucape (Figure 3.1). Defining these zones was generally based upon variability in visibility associated with sand deposition. For example, the surface of zone 1 is generally covered by an almost continuous shallow sheet of sandy overburden, with a few small dunes scattered throughout. This sand is relatively soft and tends to obscure archaeological features. Zone 2 also has a sandy surface, but the sand in this area is much more compact than that found within zone 1. In addition, this area is characterized by the presence of the massive barchan dunes that sweep from south to north across the pampa. Zone 3 is made up of the algarroba forest, which has captured large amounts of wind-blown sand, creating a relatively soft surface. Zone 4 is a large area within the Santonte dune field that is free of the deep sand that otherwise characterizes this area. As with zone 2, the surface of this zone is made up of compact sand which allows for greater feature recognition than is associated with zone 1 or zone 3. To sum: Archaeological visibility within these zones varies greatly, limiting mapping efforts in general. It should also be noted that not all of the features discussed within each zone are contemporaneous. For example, the large canal located along the west face of Cerro Cañoncillo probably dates to the Late Intermediate Period (Dillehay – Personal communication 2010; see also Dillehay and Kolata 2004; Dillehay et al 2004; Eling 1986, 1987), while the smaller canals that originated from the Quebrada Cupisnique and serviced Jatanca date to the Late Formative Period (Dillehay and Kolata 2004; see also Chapter 5).

Zone 1: Pan American Zone

Zone 1, or the Pan-American Zone, is the southernmost zone identified in this study. In addition to the low-lying stationary dunes that cluster along the Pan American Highway and form the edge of the southern boundary, there are also numerous large barchan (non-stationary) sand dunes within this zone (Figure 3.1), especially to the north of Cerro Chilco and Cerro Blanco, both of which act as a windscreen and are responsible in part for the creation of the large dunes that mark the pampa (see Chapter

2). From this point of origination, the barchan dunes cross the north-south expanse of the pampa until they become mired in the continuous stationary dune field associated with the northern boundary. Given the density of the sand within this area, identifying man-made features is extraordinarily difficult. However, continually shifting sand-free pockets exist and a few long canal segments were identified within this zone. The number of features that could be identified and mapped within this general area, however, is no doubt not representative of the actual density due to the obscuring presence of the sand. In fact, the path of many of the northeast-southwest canals easily identified and mapped within Zone #2 could not be mapped once they entered this zone.

Zone 2: Jatanca Zone

To the north of Zone 1, is the open pampa characterized by the presence of numerous barchan sand dunes, and a large unnamed red rock outcrop located in the approximate center of Pampa Mojucape (Figure 3.1). This general area is identified as Zone 2, or the "Jatanca Zone." The north end of the rock up-thrust features a lengthy, attached, cascading series of sand dunes that ultimately break away and travel north directly toward Jatanca. This portion of the pampa is made up of a hard-sand surface, much of which is heavily deflated, yet retains fragmentary evidence of large canals and *mampuestos*[7] oriented in a predominantly northeast-southwest direction, which likely date to the Late Intermediate Period. There is also some evidence of small feeder canals that at one point served the few visible examples of *surcos* that can still be seen within this area. In general, the visibility of these smaller features increases as one proceeds closer to the southern and western base of the large rock outcrop.

Cerro Cañoncillo, which forms a portion of the eastern edge of Zone 2, is about 3.3 kilometers in length and 549 meters in height at its peak. There are numerous locations along the western face of Cerro Cañoncillo where pockets of drifting sand have pooled to heights in excess of 100m. The eastern face of Cerro Cañoncillo – especially

[7] A term used by Andeanists to describe an "aqueduct."

along the edge at which it connects to neighboring Cerro Prieto Espinal – is covered with drifting sand that obscures large segments of its surface and reduces archaeological visibility. Foot surveys of the spine and the western slope in 1997 (Dillehay et al. 1998), 2004 (Warner 2006), and 2008 (Swenson et al. 2009) have yet to reveal the presence of any constructed features such as platforms, walls, or buildings along the west face of this geological feature. There is, however, an unusual rock formation along the spine of the cerro, which is visible from the site of Jatanca. In 2004, a single diagnostic mold-pressed ceramic sherd (Warner 2006; see Chapter 4) was found nearby. Subsequent examination of the unusual rock formation in 2008 revealed the presence of several more ceramic sherds along with numerous small pieces of un-worked spondylus[8]. Given the obvious visibility of this unusual outcrop from Jatanca, the presence of mold-pressed finewares, and spondylus, it seems plausible that this rock outcrop was a small, local *huaca*.

Zone 3: Santonte Dune Field

Zone 3, also referred to as the Santonte Dune Field (Zone #3), is the northernmost zone and consists of a long, relatively continuous band of sand that spans the east-west distance between the Western Dune Field and the algarroba forest (Figure 3.1). There are numerous breaks within this dune field that reveal the presence of short canal segments, *surcos*, and domestic scatters, which generally date to the Late Intermediate Period. Like the eastern slope of Cerro Cañoncillo, visibility within this zone s extremely poor, making an accurate assessment as to the relative density of cultural activity largely impossible. However, based upon the distribution of relatively large canal segments identified within this zone, at some point in prehistory water was clearly brought around the western edge of Cerro Santonte and through this area using a combination of canals and *mampuestos*. These canals run north-south and were used

[8] Spondylus is a marine shell that grows and is harvested in warmer waters, such as those associated with the coast of Ecuador(see Cordy-Collins 1990).

to bring water to Zone 1, Zone 2, and perhaps areas far to the south toward Puemape (see Chapter 2).

Zone 4: Tecapa Zone

Zone 4 is made up largely of the algarroba forest associated with the large Chimú/Inca site of Tecapa (Figure 3.1), which was occupied during the Late intermediate Period-Late Horizon. Today, this wooded *algarrobal* provides an oasis-like shelter for numerous birds, reptiles, and mammals within the Pampa Mojucape. Unfortunately, human and domestic animal traffic within Zone #4 may have resulted in the destruction of many of Tecapa's more delicate architectural features. Despite the destruction, there is abundant evidence of prehistoric agricultural activity that likely dates to the occupation of Tecapa, especially within the northern portion of the zone where numerous main, branch, and feeder canals were employed to bring water to a series of well-preserved *surcos.* There are a few ceramics scattered throughout the agricultural fields and most of these are Chimú, although some Chimú/Inca material (see Donnan 1997; Swenson 2003, 2004 for detailed typology) was also located (see below). There are four small, shallow lakes[9] located within Tecapa's Algarroba forest that could have been used by local Prehispanic populations as a source of water for domestic purposes. However, these lakes were probably never of sufficient volume to have been used for large-scale irrigation (see Eling 1987).

[9] The actual number of lakes varies periodically due to the rise and fall in the water table (see Eling 1987 for a detailed discussion). In 2004-2005, there were only two well-defined lakes that did not appear to be particularly deep. The third and southernmost lake was really more of a damp depression in the earth that had a few centimeters of water in its center and a thin line of vegetation (primarily cattails) growing around its short perimeter. These lakes have been cored by prior projects (see Dillehay et al. 1998-2001 for details). According to Tom Dillehay (personal communication 2008), the lakes and the surrounding algarroba forest may be relatively late in origin as lake coring conducted in 1997 revealed the presence of a significant archaeological layer that was unlikely to have accumulated had the lakes been present during the Late Intermediate Period occupation at Tecapa.

Constructed Features

Most of the above zones contain numerous examples of constructed features such as monumental architecture, vernacular structures, canals/*mampuestos*, walls, *surcos*, roads, and domestic scatters. While the large-scale sites such as Jatanca are the most visible features on the pampa, smaller associated features such as canal segments, roads and *surcos* need to be incorporated into the total operative scheme in order to better understand the network of social relations responsible for the construction and maintenance of Jatanca. The description of the constructed features associated with the Pampa Mojucape begins with the large scale architecture and concludes with additional features related to agricultural activity, roads, and domestic scatters. After describing in general terms all of these features, this chapter will conclude with a synthesis of the Pampa Mojucape's development.

Large-Scale Architecture

Within the Pampa Mojucape, large-scale, complex architecture is confined to three major sites: Jatanca, Tecapa, and Huaca Colorado (Figure 3.1). Jatanca is located in the exposed center of the Pampa Mojucape (Zone 2), while both Tecapa and Huaca Colorado are situated about 1.8 km to the north within the southern portion of the algarroba forest (Zone 4). It is worth noting that Ubbelohde-Doering (1966) speculated that the initial inhabitants of Jatanca abandoned the site due to the continuous onslaught of barchan sand dunes, and as a response eventually resettled at the site of Tecapa, which was sheltered by the algarroba forest. While the more than 1000 year-gap between the occupation at Jatanca and Tecapa is far too great to support such a scenario, it is possible that Jatanca was abandoned due to the waxing of dune activity, exacerbated by the drying up of the river associated with the Quebrada Cupisnique, an idea discussed further below. Somewhat ironically, today Tecapa is inundated with more sand than Jatanca due to the presence of the trees that act as both a wind screen/barrier, and the nearby presence of Cerro Santonte, against which the migrating dunes accumulate and spill back toward the south and into the northern portions of

Tecapa. Huaca Colorado, which was constructed and inhabited at some point between the Jatanca and Tecapa occupations, is adjacent to Tecapa (Swenson et al. 2010). The eastern edge of this mound was incorporated into Tecapa's overall architectural scheme via the construction of an east-west wall that runs partially up the eastern edge of the huaca. The above three sites are the only significant large sites found on the Pampa Mojucape and are described below in greater detail (see also Chapter 6).

Jatanca

Prior to World War II, Ubbelohde-Doering (1966) excavated within the architectural core of Je-1023. Unfortunately, the results of his efforts were not extensively published. For example, the architectural layout of the site is not described in detail, nor did he publish any regional maps or plans. Nonetheless, photos (Ubbelohde-Doering 1966) indicate that Jatanca was composed of a series of large, complexly arranged walls made of tapia and conical adobes, the presence of which was used to argue that the site dated to the Formative Period. It appears as though he concentrated his work within the Acropolis, but excavated within some portions of the compounds as well[10]. During the course of excavation within the Acropolis, Ubbelohde-Doering (1966) encountered at least one interior staircase that had several broken ceramics on its surface. According to Ubbelohde-Doering (1966) the ceramics were "Gallinazo" in cultural affiliation – a claim called into question by Shimada (1993) who argues they are better referred to as "Gallinazo-like" (see Chapter 4).

During the 1997 field season, Proyecto Jequetepeque excavated a trench on the west side of the Acropolis and cleaned a looter's pit about 50 meters due north of the same structure (Dillehay et al. 1998). The goal of this activity was primarily to examine construction sequences and recover carbon samples from within intact strata located beneath outwash deposits in an effort to better-understand the interaction between

[10] During the 2007 field season, a backfilled archaeological cut was found within the western ramp/platform of Compound II that had resulted in the removal of the entire ramp and most of the platform. It seems likely that this unit was the result of Ubbelohde-Doering's work (Swenson, Chiguala, Warner 2008).

site residents and dynamic environmental conditions. Once processed, carbon samples returned dates that established the antiquity of the acropolis (range = 2370±50B.P. and 2560±50B.P. conventional age), and provided a baseline figure of initial occupation within the site (Dillehay and Kolata 2004; see Chapter 5 for detailed discussion).

Based upon the mapping activities of this project, the architectural core of Jatanca (Figure 3.2) is made up of seven free-standing, rectilinear, multi-roomed compounds, and one single-room compound (Compound VII) oriented along a shared north-south axis[11]. Six of these compounds are tightly clustered (Acropolis, Compounds I-IV and Compound VII) with one (Compound VI) spatially segregated from the core. Indeed, only a few meters separate the north edge of Compound I from the south edge of Compound II, or the west edge of Compound III from the east edge of Compound IV. As noted by Ubbelohde-Doering (1966) the primary building material used to construct Jatanca is tapia, or "rammed earth," but there are two large wall segments where substantial amounts of conical adobe bricks (the Acropolis) and rectilinear adobe bricks (west exterior wall of Compound IV) were also utilized.

The Acropolis and Compounds I-VI can be sub-divided into a series of interconnected rooms, hallways, entries, ramps, and platforms. While the compound walls vary in the quality of their preservation, it appears as though the slightly tapering exterior walls may have stood to a height of well-over two meters and averaged more than one meter in thickness along the base. These walls are constructed in a continuous, sectional manner (both horizontally and vertically), which may indicate the presence of corporate labor activity (see Chapter 8). Five of the compounds (Compounds I–IV and the Acropolis) have a distinctive plaza/ramp/platform complex (PRPC) located in their northern extreme that probably served as the primary loci of public ceremonial activity and secular activities as well (see Chapter 7). Compounds II, III, and IV have additional, smaller examples of this plaza/ramp/platform complex that are located deep within relatively "private" areas of the compound (see Chapter 6). Compounds I and V also have additional smaller plaza/ramp/platform complexes, but

[11] See Chapter 6 for detailed plans and descriptions of all compound interiors.

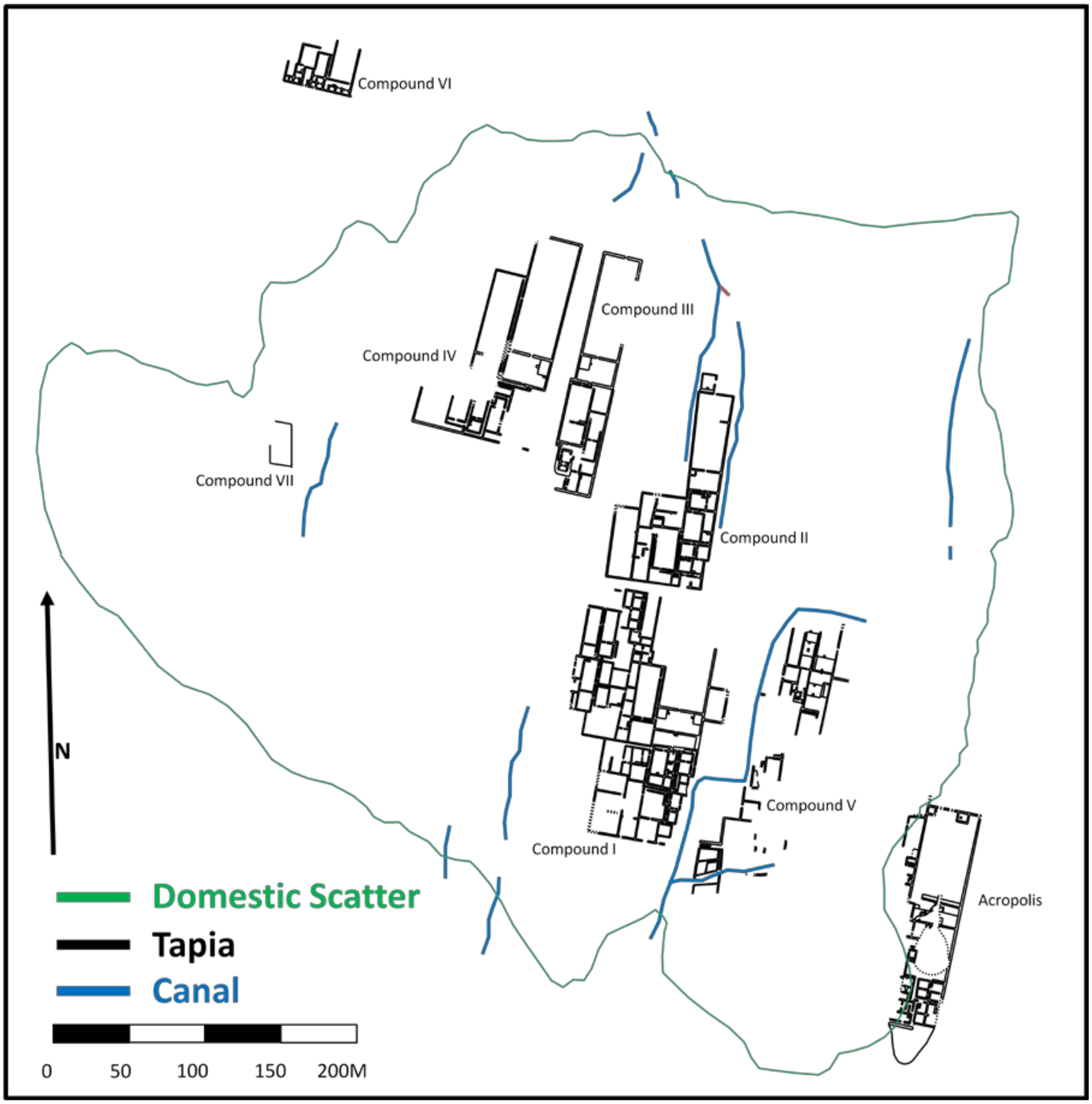
these have a slightly different layout than the main PRPCs (see Chapters 6 and 7). Compound V also contains multiple unique ramp/platform combinations that occur in a variety of configurations (see Chapter 6). Finally, it appears as though the architects of Compounds II and III also incorporated a low-lying, tapia mound into the building that serves as a platform for a complex configuration of rooms, ramps, and benches (see Chapter 6).

There is a dense accumulation of ceramics, traditionally affiliated with the Cupisnique, Salinar, and Gallinazo cultures (see Bennett 1939, 1950; Collier 1950; Willey and Ford 1949; Strong and Evans 1952; but see also Attarian 2009; Donnan 2009; Millaire 2009) that surrounds the architectural core. Most of these date to the Late Formative Period (see Chapter 4), but ceramics dating to the Middle Formative Period, and perhaps earlier, are present in much smaller quantities. In general, these earlier ceramics are found along the south edge of the Acropolis and appear to be eroding out of the sloping hillside. The presence of human bone in this area, combined with burnishing and other surface elaborations of the sherds, would indicate that these earlier ceramics were used for mortuary purposes. The vast majority of the ceramics associated with Je-1023, however, were used for domestic purposes, as evidenced by a predominance of undecorated ollas, tinajas, and *ralladores*[12], but some finely- crafted, highly burnished spouts have been found among the domestic debris, along with negative resist wares (Swenson et al. 2008, 2009, 2010; Warner 2006). It is critical to note that ceramics associated with later culture groups such as the Moche, Lambayeque, or Chimú are seldom encountered within the architectural core of Je-1023. This indicates that these compounds were not re-inhabited or reconfigured in any meaningful way by subsequent groups after their initial abandonment sometime during the terminal Late Formative Period. Dates acquired by this project from intact

[12] A type of grater-bowl

archaeological context (see Chapters 5 and 6) and Proyecto Pacasmayo (Dillehay and Kolata 2004 – Table 1[13]) confirm the site's primarily Late Formative Period occupation.

Figure 3.2 – Map of Jatanca



[13] The five dates (conventional age, years) are: 4,190 ± 40 B.P. (occupation layer – Beta-109092); 2560 ± 50 B.P. (occupation layer – Beta 109091); 2520 ±50B.P. (Occupation layer – Beta 117746); 2370 ± 50 B.P. (occupation layer – Beta 117747); 180 ± 50 B.P (flood deposit – Beta 109092).

Huaca Colorado

This huaca has a sloping mound-like form due to the extraordinary amount of sand that has accumulated after abandonment (for location, see Figure 3.1). Huaca Colorada is approximately ten-meters in height and covered with numerous examples of Late Moche domestic ceramics (see Swenson 2004 for typology; see also Swenson et al. 2009, 2010), *donax*, and lithics. In addition to the domestic wares, numerous examples of finewares such as fine-line polychrome and mold impressed wares have also been found on the mound and within the immediate area. While very little architecture can be identified via simple surface survey due to the dense accumulation of wind-blown sand, there is little doubt that beneath this mound there is an abundance of construction that dates to the Late Early Intermediate Period, as looters have revealed the presence of numerous adobe wall alignments, small painted abstract murals, and intact features such as adobe-lined depressions used for keeping large tinajas upright[14]. It seems evident that during the Early Intermediate Period, Huaca Colorado was the location of a large Late Moche population (Swenson et al. 2009, 2010).

It should be noted that with the exception of Huaca Colorado, very few examples of Moche ceramics were found during the 2004 pedestrian survey (see also Schaedel N.d.), with only two notable exceptions: 1) a small amount of Moche domestic wares were found just north of San Pedro de Lloc within the southwest portion of sector 1 (Figure 3.1); and 2) a few examples of very small concentrations of Moche ceramics were recovered within the dune fields located to the far west of zone 3 – approximately 2.5 kilometers northwest of Huaca Colorado (Figure 3.1). This could be viewed as providing tentative evidence that runs somewhat counter to Moseley and Uceda (2008), who argue that there were large concentrations of early Moche populations within the

[14] In 2008, Proyecto Jatanca initiated a long-term project at Huaca Colorada. The initial season focused upon mapping the mound with a total station and making an initial ceramic collection (Swenson, Chiguala, Warner 2009). In 2009, the majority of Proyecto Jatanca's attention was turned to Huaca Colorada and excavation activity commenced demonstrating effectively that below the surface, the site is composed of superimposed levels of complex architecture perhaps organized around interior plazas (Swenson, Chiguala, Warner 2010). Since these data were not a part of the 2004-2005 field season, they are being excluded from this dissertation.

southern Jequetepeque Valley that cannot be archaeologically identified due to the presence of barchan and stable sand dunes.

Tecapa

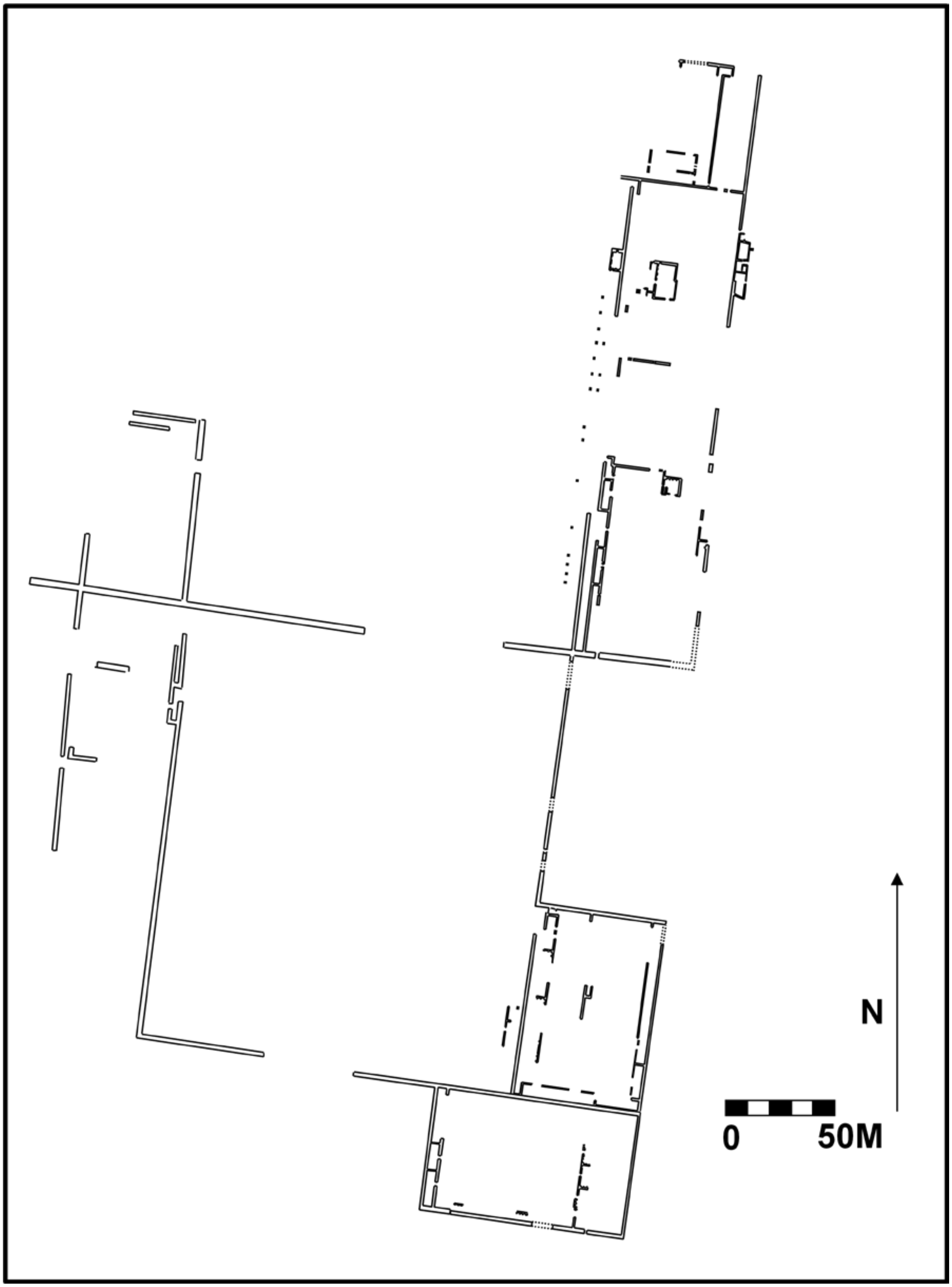
While there is quite a bit of stationary sand within the Late Intermediate Period structure of Tecapa, a number of statements can be made. This primary compound is made entirely of rectilinear adobes and can be broken down into a series of large, apparently open plazas that are connected via numerous direct and baffled entries. The entire structure is oriented 7 degrees east of true north (Figure 3.3) and is generally well preserved as many of the exterior wall segments stand in excess of 4 meters in height. The walls that make up the interior of Tecapa are considerably smaller, liberally chinked with small flat stones, and contain numerous niches – many of which are identifiable only upon close inspection near ground level due to segments of poor interior wall preservation.

There are some noteworthy architectural features associated with this site. For example, along the western exterior wall, there is a unique series of square pillars that likely served as bases to columns made of perishable material that at one time supported a long, perhaps continuous roof, also made of perishable materials (Ubbelohde-Doering 1966). Ubbelohde-Doering (1966) argued that these pillar bases were a canon of Jequetepeque valley architecture during the Late Intermediate Period. In addition, some possible "*audiencia*-shaped" structures were also identified during mapping in 2004. Based upon their location and lack of associated storerooms, however, it is doubtful that the function of these features is analogous with those from Chan Chan (Andrews 1974; Day 1982) or nearby Farfan (Keatinge and Conrad 1983). It will be necessary to excavate these features in order to better-understand how they functioned.

When compared to Jatanca, the density of the ceramics associated with Tecapa is light (especially within the interior), but the few ceramics found indicate that the occupation of the site dates to the Chimú /Chimú-Inca Period. Proyecto Pacasmayo acquired a number of dates from a variety of contexts within Tecapa (Dillehay and Kolata 2004) and these dates further reinforce the site's Late Intermediate Period occupation.

There is an additional free-standing square structure located approximately 500 meters to the west of Tecapa's core that is also made of adobe bricks and oriented approximately 24 degrees east of true north. The structure is large (150m x 150m), built of rectilinear adobes (approximately 32cm x 14cm x 10cm), and is covered with wind-blown sand that obscures almost all of the internal architectural detail, with only a few small internal adobe walls visible above the surface of the sand. The northernmost corner of this structure is exposed and stands at least 3 meters in height above the surface of the stationary sand that surrounds this structure. A small number of ceramics were collected from this site, all of which dated to the Late Intermediate Period. Given that this compound is made of rectilinear adobe bricks, its proximity to Tecapa, its orientation, and the presence of Late Intermediate Period ceramics, it seems likely that this compound is part of Tecapa and occupied contemporaneously. Given the large amount and apparent depth of the sand between this structure and Tecapa, it would not be surprising to learn that there were additional LIP structures in the area that are also obscured by the current conditions – a possibility alluded to by Eling (1987) as well.

Figure 3.3 - Plan of Tecapa



The Canals/*Mampuestos* Pattern

In addition to Jatanca, Tecapa, and Huaca Colorada, the most visible feature on the Pampa Mojucape is the extensive system of canals (Figure 3.4) that radiate across the pampa in a general north to south direction[15]. It must be emphasized that the chronological relationship of these canals to each other and to the various sites within the pampa is, at this point in time, speculative. Nonetheless, a radiocarbon date acquired from a canal within Jatanca along with the general pattern of canals allows for the discussion of a number of hydrological aspects of the region. The water used in this system was drawn from two primary sources: the Jequetepeque River (via Pampa de Pitura and Pampa del Guerreque) some 21 kilometers to the northeast of Jatanca and the now dry Quebrada Cupisnique (Dillehay – Personal communication 2010). Between these two systems, water was distributed throughout the pampa across a potential minimal area[16] of approximately 3,000 hectares and supplied water necessary for agriculture, compound construction, and domestic consumption. Most of these canals were previously mapped by Eling (1986, 1987) with the aid of aerial photos. While this was an extremely effective way of mapping such lengthy features some 40 years ago, much of the subtlety was left out, with smaller branch and feeder canals being too small to be recorded. Therefore, these regional maps recorded with a Trimble represent a technologically-based improvement over this prior work.

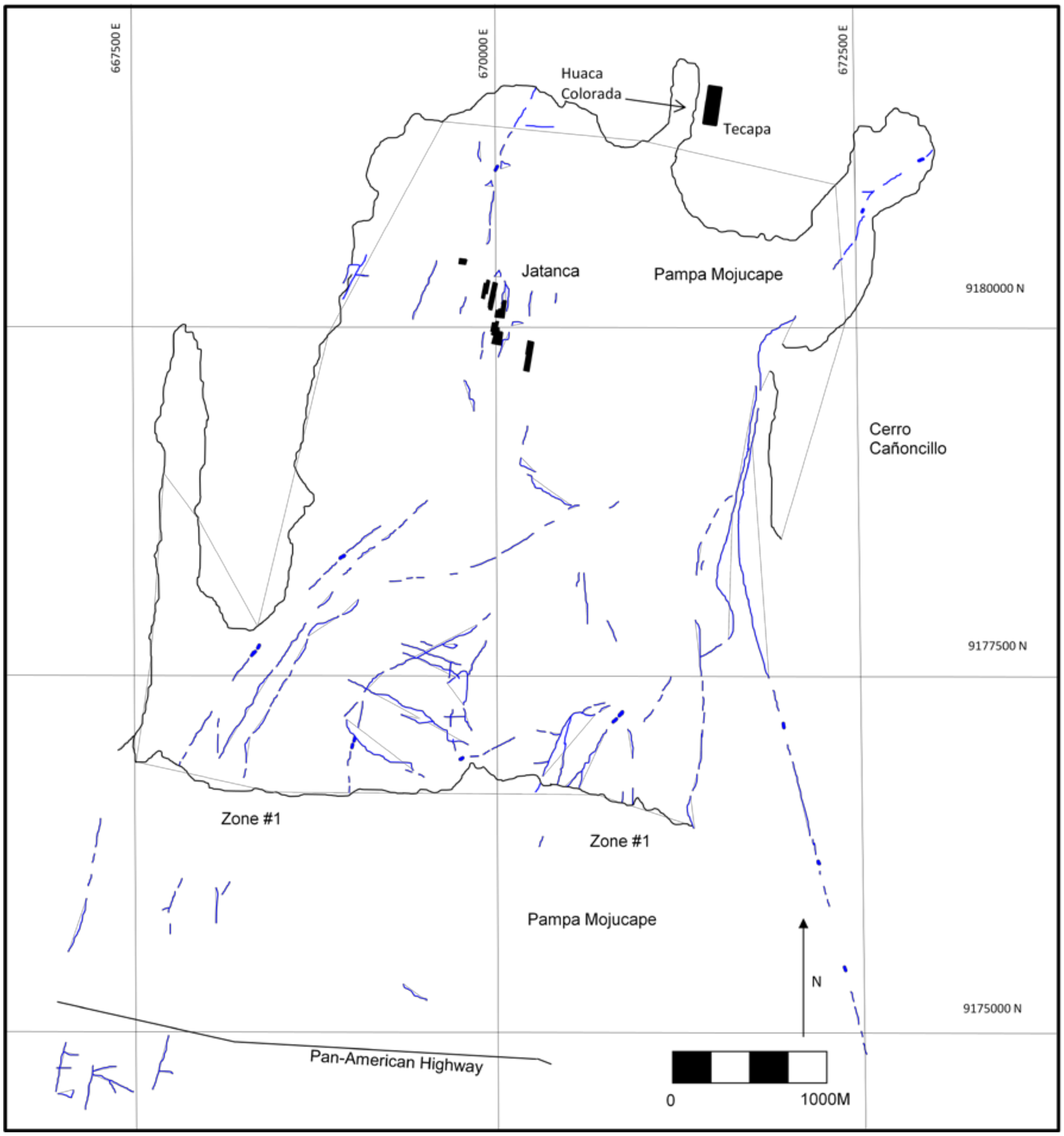
With the exception of the large canals located in the east that date to the Late Intermediate Period (Dillehay and Kolata 2004; Dillehay et al. 2004), the canals on the Pampa Mojucape are in a generally very poor state of preservation. Often, only short segments of canal could be mapped before the course was no longer visible due to wind

[15] At times, the distinction as to whether a feature is best-described as a canal or *mampuesto* (aqueduct) is difficult to make since the rolling topography of the Pampa Mojucape necessitated the use of both *mampuestos* in order to span topographic depressions, and sub-surface canals, in order to pass through small rises. Indeed, many of the Pampa Mojucape canals located in the east incorporate lengthy *mampuestos* into their design at appropriate junctures in order to span gaps located in the wash associated with the Quebrada Cupisnique. In addition, within portions of the Pan-American and Jatanca Zones, erosion has removed the original topsoil leaving the prehistoric canals artificially elevated above the surrounding plane, giving them a "*mampuesto*-like" appearance. For the sake of simplicity, all of the canal/*mampuesto* features will be referred to as "canals."

[16] Due to dunation, modern-day destruction, and long-term erosion there can be little doubt that when in use this irrigation system covered much more of the surface of the pampa than is visible today.

and water erosion – especially within the Pan-American Zone where the Quebrada Cupisnique passes through from northeast to southwest. Recent ENSO events (1998) have also encourage nearby residents of San Lorenzo de Jatanca and Santonte to use the Pampa Mojucape for the purposes of expedient agriculture, which has also resulted in the additional loss of canal pattern data. Modern-day activity is abundant in the form of retaining walls used to pool water and shallow, modern canals used for its subsequent distribution have had an especially negative impact on archaeological preservation within the western portion of the Jatanca Zone. A few small modern structures, which were used by the homesteading agriculturalists, also dot the landscape, adding to the general destruction of prehistoric agricultural information. In 2005, a large well was dug within the Pan-American Zone so as to provide water for industrialized agriculture on the pampa. Unfortunately, this well was placed so that it partially destroyed one of the few remaining prehistoric segments within the entire southern valley. As of 2009, the agricultural development of the Pampa Mojucape had not yet occurred. However, should this area undergo development, most of the remaining archaeological features within the Pan-American Zone and the southern portion of the Jatanca Zone would likely not survive.

Figure 3.4 – Canal Pattern on Pampa Mojucape (not all canals date to same period)



Given the above issues related to preservation, one must proceed with caution when discussing the local canals system. Nonetheless, an examination of the pattern of extant prehistoric irrigation canals on the Pampa Mojucape reveals a number of interesting things. In general, within the Jatanca Zone, there are numerous dendritically patterned canal systems that distribute water across the pampa. The canals follow the topographic slope of the land and are generally oriented northeast to southwest.

Unfortunately, the course of most of these canals cannot be charted once they enter the Pan-American Zone, but based upon their size at the point in which they are obscured by stationary sand dunes, it can be reasonably assumed that they continue on for a considerable distance to the south – perhaps as far as the Puemape area (see Chapter 2). Furthermore, some lengthy canal segments located within dune breaks were mapped within Zone 1, the trajectory of which puts them in line with the large segments located to the north in Zone 2, further underscoring the size and length of canals on the Pampa Mojucape. It seems likely that these canal segments date in construction and use to the Late Intermediate Period.

It should be noted that a substantial portion of the pampa to the south of Tecapa may not have been irrigated (Figure 3.4). No sizeable canal segments were recorded within this area despite an intensive week of survey. The presence of the algarroba forest located to the immediate north of the area may have been a contributing factor as this area is made up of a rolling terrain that is bisected by numerous deep gullies, many of which are greater than 5 meters in depth. If the forest existed during antiquity, running water through this area in an effort to irrigate a relatively small portion of the pampa may not have been topographically possible, or economically feasible. However, it is also possible that this sector was irrigated during prehistory (most likely during the Late Intermediate Period), but the evidence of this activity has been subsequently destroyed by erosion. Indeed, today, the soils within this area of the pampa are among the Pampa Mojucape's most deflated.

This irregular terrain within the forest also calls into question the role played by the lakes[17] in pampa-wide irrigation (Figure 3.1). According to Eling (1987), the shallow lakes located to the northeast of Tecapa may have served as a "holding tank" that could be used for small scale, local irrigation. Pedestrian survey in this area conducted in 2004 did not, however, reveal the presence of any irrigation canals that could have been used to fill/drain these largely seasonal lakes. In fact, it would seem that the topographic variation in the immediate terrain would restrict any use of the lakes for irrigation to

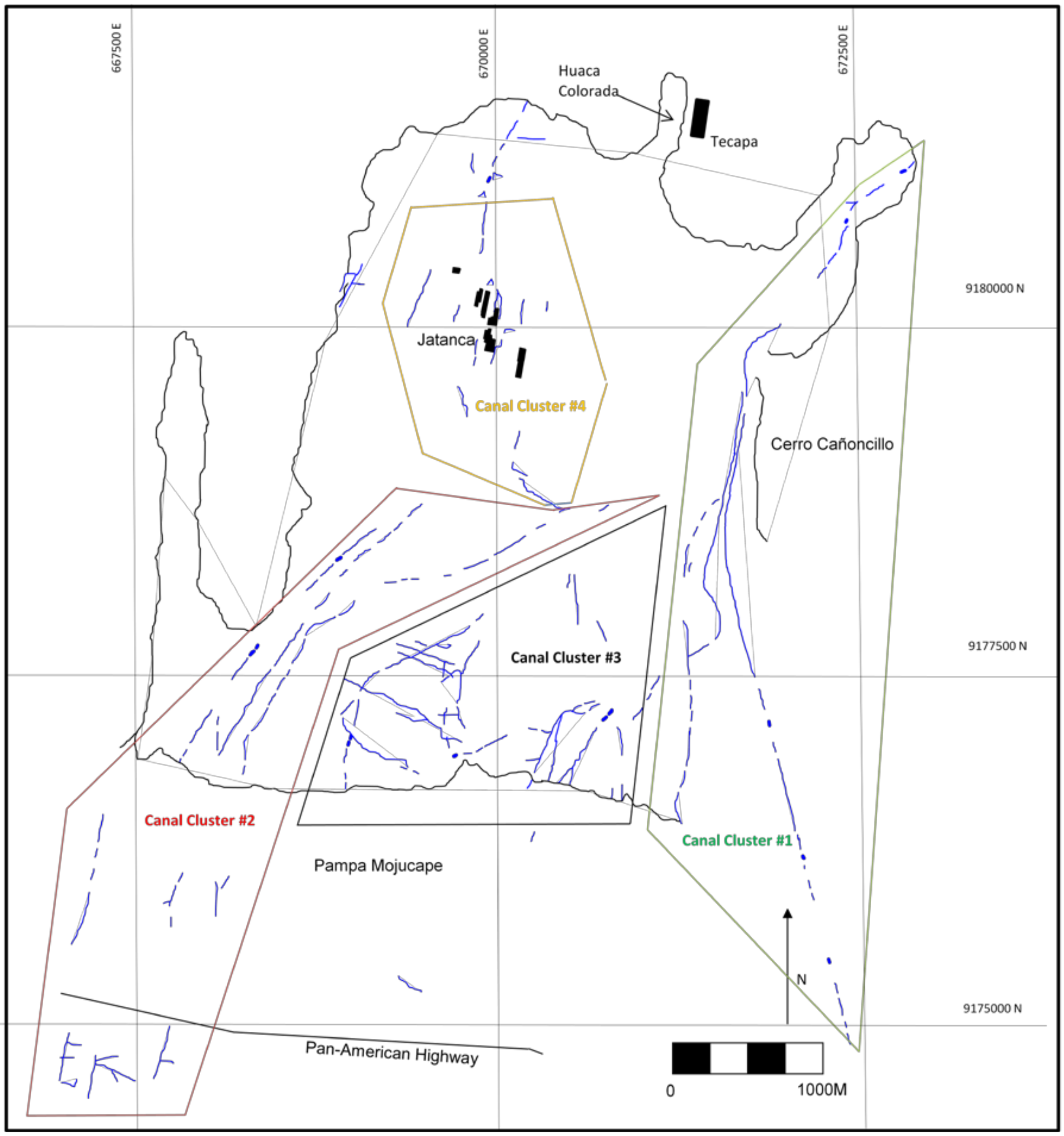
[17] The presence of these lakes may in fact be relatively late – as late as the very Late Late Intermediate Period through the Colonial Period (Dillehay – Personal Communication 2010).

only the immediate area, rather than having been tied into the broader Pampa Mojucape irrigation system.

Irrigating the Pampa

When combining maps made by previous projects (Dillehay et al. 2009; Eling 1986, 1987; Hecker and Hecker 1990) with those created by this project and topographical data acquired from maps of the Jequetepeque Valley, during the Late Intermediate Period, it appears as though irrigation canals brought water from the Jequetepeque River via a route that passed though the Pampas de Pitura and del Guereque, the Tecapa *portachuelo*, finally entering the Pampa Mojucape from the northeast. It is also possible that some water was brought around the north side of Cerro Santonte, but no canals were identified within this area. After passing through the narrow *portachuelo*, the canals were diverted into two major clusters – Canal Cluster #1 and Canal Cluster #2. (see also Eling 1986, 1987). The first route (Canal Cluster #1) hugged the western face of Cerros Pitura-Espinal and Cañoncillo, while the second route (Canal Cluster #2) directed water through an area just south of Jatanca over toward the western edge of the pampa. In this way, water could then be released from the canals along the edges and into the center of the pampa. Cluster #1 is made up of the largest relic canals located within the southern portion of the Jequetepeque (Dillehay – Personal communication 2010; see also Dillehay and Kolata 2004). At the southernmost point of Cerro Cañoncillo, these canals radiate out and provide water to a large portion of the Pan-American Zone. Canal Cluster #2 irrigated the western edge of the pampa and was used to transport water beyond the Pampa Mojucape area towards the south and Cerro Puemape. Unfortunately, the preservation and visibility of surface-level agricultural features for Canal Cluster #2 is very limited due to both the amount of stationary sand present in Zone #3 and to wind erosion.

Figure 3.5 – Potential Large-Scale Canal Clusters



Canal Cluster #3 and Canal Cluster #4 are the likely remains of relic canals associated with the now dry Quebrada Cupisnique. These clusters include many of the small canals segments that are located within the central portion of the pampa along with those that surround the unnamed outcrop of red rocks (see Chapter 2). In addition, many of the canals within Canal Cluster #4 that wind between the Jatanca compounds were also likely supplied via water from the then-running Quebrada Cupisnique (Dillehay – Personal Communication 2010).

While some might question whether or not the canals that run through Jatanca (Canal Cluster #4) are actually contemporary with the occupation of the site, and not perhaps the result of a later occupation that attempted to irrigate the southern sector of Zone 2 by running canals through the long-abandoned site, data acquired during excavation effectively refutes this. In 2005, one of the small canals associated with Compound V was excavated primarily for the purpose of obtaining carbon from meaningful context (see Chapter 5- Canal Cut #2). This sample returned a conventional date of 2090±40 BCE (Beta 216932), indicating that this canal was in use contemporaneous to the occupation of Jatanca, and was not constructed after the site was abandoned (see Chapter for radiocarbon date details).

Irrigation canals on the Pampa Mojucape provided water for numerous purposes beyond agricultural production. For example, based upon their close proximity to Late Intermediate Period domestic zones (see below), irrigation canals also provided water for the production of *chicha*, cooking, and household consumption. At Huaca Colorada (Swenson et al. 2009, 2010) and Tecapa, water from irrigation canals could have been used as part of the process associated with the manufacture of adobe bricks and/or the mortar used to bind them together. Within Jatanca, the canals that irrigated the area and provided water for domestic use could have also been used to provide water and raw material for the production of tapia[18].

Unfortunately, due to wind and water erosion, finer details related to the use of water for irrigation and agricultural activity on the pampa are difficult to discern due to a lack of data associated with features such as branch canals, feeder canals, and *surcos*(relic agricultural fields). Indeed, depending upon where one is standing, the barren patches that currently demarcate vast areas of the Pampa Mojucape give the casual observer the false impression that there was little in the way of organized, large-

[18] The color and consistency of the silt within the canals that service Jatanca is similar to that of many of the tapia wall segments used in construction. Therefore, it seems likely that material obtained during canal cleaning events was incorporated into the construction of the compounds (see Chapter 8).

scale crop production on the Pampa Mojucape during the Prehistoric Period. Nonetheless, a few well-preserved areas such as those surrounding Jatanca, Tecapa, the Western Dune Line, and the freestanding rock outcrop (Canal Cluster #3) have been located where subtle features such as feeder canals and serpentine *surcos* have been preserved, clearly demonstrating that this was not the case. When combining the number, size, and distribution of the main canals with the scattered remains of feeder canals and *surcos*, it is clear that tremendous amounts of agricultural production must have occurred throughout Pampa Mojucape from at least the Late Formative Period and beyond (Dillehay 2001; Dillehay and Kolata 2004; Dillehay et al 2009).

Estimating the overall area of agricultural production associated with the Pampa Mojucape for any given point of time is somewhat dubious as the temporal relationship among the canals has yet to be established. While it is tempting to assume that all of the canals were in operation and that approximately 3,000 hectares of land was under agricultural production at any given time, this may not actually have been the case. The possibility that the wide-spread distribution of canals across the pampa is actually a cleverly-engineered human response to the periodic inundation of the barchan sand dunes must also be considered (Dillehay 2001; Dillehay and Kolata 2004). In this scenario, the construction of the elaborate irrigation system allowed for the effective re-routing of water if a canal or agricultural field should be threatened by barchan dunes, thereby maximizing the relationship between irrigation and arable land (Dillehay 2001; Dillehay and Kolata 2004). While a system such as this represents a tremendous amount of time/energy expenditure in the short-term, the long-term return, as measured by a potential increased overall agricultural efficiency and flexibility in reacting to changes in the environment, would have also been considerable (Dillehay 2001; Dillehay and Kolata 2004).

The Walls

Within the study area, there are a few free-standing wall segments associated with either vernacular or monumental architecture[19]. Most of these are poorly preserved due to water and wind erosion. Once mapped, these segments could be grouped into two possibly continuous east-west walls, both of which are located between the sites of Jatanca and Tecapa. Despite their overall poor condition, some of the wall segments (especially toward the west of Wall #1) still stand over 2 meters in height. Wall segments within this area probably owe their excellent state of preservation to a fortuitous combination of the slight rise in topographic elevation (which has reduced flood damage from pooling water) and the presence of relatively stable sand dunes (which have reduced wind erosion). These walls are made of adobe, chinked with small, flat stones, and bonded with mortar-like mud throughout. The walls are not particularly wide (less than 1 meter wide at the base), which may has also contributed to their general poor preservation. There are other isolated wall segments located throughout the study area, but these tend to be much smaller, narrower, and poorly preserved.

During initial mapping in 2004, a close inspection of the wall segments was made in an effort to identify any diagnostic ceramics that may have been incorporated either into the adobe itself, or as chinking between the bricks as an aid in chronology building. Unfortunately, none were identified and a *terminus post quem* date for the construction of the wall could not be established. An additional chronological problem is the fact that these walls are not clearly associated with any of the pampa's architectural features or domestic scatters – an issue also identified by Eling who noted that "many walls…on the Pampa Mojucape seem to be isolated, with no relationship to any other structure" (1987:55). Nonetheless, the bricks within the walls appear to be similar in size (approximately 32cm x 20cm x 10cm) and shape (rectilinear) as those seen within the nearby site of Tecapa, which based upon its architectural configuration and the ceramic material that surrounds the site, clearly dates to the Chimú/Chimú-Inca

[19] Unfortunately, these wall segments are too short to be visible on Figure #3.1

period (Dillehay et al 1998-2001; Hecker and Hecker 1990; Ubbelohde-Doering 1966). Therefore, it is possible that the construction of these two walls may date to this same point in time – approximately the Late Intermediate Period to the Late Horizon.

The function of these walls is also unclear. According to Eling (1987:55), free-standing walls on the pampa served two functions: "defense and as boundary markers." However, as a defensive aid, even if these walls spanned the entire east-west width of the pampa, it's not readily apparent exactly what they are defending as the area between the two walls is largely devoid of any significant features. It also seems doubtful that the walls functioned to protect Tecapa as the site would have been exposed to attack from the west and north. If the walls actually date to the construction of Jatanca, which based upon the construction material is highly unlikely, the walls only afford protection to an attack from the north as the west, south, and east flanks of the site are completely exposed. While it is possible that additional defensive walls were built to better-protect either Tecapa or Jatanca, evidence of their presence was not encountered.

At this point it seems more likely that Eling's latter hypothesis that the walls served as territorial boundaries is more likely. Survey conducted outside of the Pampa Mojucape area by Proyecto Pacasmayo (Dillehay et al. 1998, 1999, 2000, 2001) and other scholars (Eling 1986, 1987; Hecker and Hecker 1990; Ravines 1982) revealed the presence of numerous walls throughout the entirety of the Jequetepeque Valley that likely did not serve a defensive purpose, but may have indicated territorial divisions based on sociopolitical organization.

Surcos

Within the Jequetepeque Valley, relic agricultural furrows, or *surcos*, take on two general forms: 1) serpentine and 2) interlocking. The serpentine form is generally associated with the Moche of the Early Intermediate Period, while the interlocking form is usually associated with the Late Intermediate Period cultures such as the Chimú (Hecker and Hecker 1990). Unfortunately, generally speaking, it was often impossible to identify the *surco* form and chronologically associate it with a North Coast culture group due to the small size of the preserved area.

Nonetheless, during the course of survey, numerous *surcos* were identified, with the state of preservation varying from poor to good. *Surcos* tended to be found on the west side of Zone 2 (Jatanca Zone) and north of Tecapa within Zone 4 (also see Eling 1987; Ubbelohde-Doering 1966), but this may be due more to factors related to preservation than actual distribution, as many areas of the Pampa Mojucape contained at least a few marginal examples of this agricultural feature. In addition, the fairly regular distribution of the irrigation canals argues that the differential distribution of this feature is probably more related to preservation issues than the actual distribution of agricultural activity. In addition to irrigation canals, it is of further interest to note that *surcos* are typically found in association with domestic scatters (discussed below), and *yardangs* (see Chapter 2 and below).

Yardangs

The importance of identifying *yardangs* extends beyond just the recognition of a unique geological feature associated with the accumulation and subsequent erosion of agriculturally deposited soils. Indeed, almost all of the above *surcos* were found on the surface of short *yardangs* (see Chapter 2) located in the western portion of the Jatanca Zone. When compared to the large *yardangs* to the south of the Pan-American Highway (Figure 3.1), these *yardangs* are relative short and small. In general, they are approximately one-meter (and often much less) in height and only a few meters in length. Yet despite this obvious difference in size, they are similar to the much larger examples, as they too have been formed through the erosion of once-deep pockets of relic top soil; they are oriented along an elongated north-south axis; the surface of the *yardangs* sometimes contains older artifacts than the surrounding lower surface level; and the surface of these features contain evidence of relic agricultural features such as irrigation canals and *surcos* (Eling 1986, 1987). The scattered presence of this feature further underscores the likelihood that most (if not virtually all) of the Pampa Mojucape was used for agriculture during at least portions of prehistory.

Prehistoric Roads

A short segment of prehistoric road located near the border of Zone 1 and Zone 2 was mapped during the 2004 field season within the southern portion of Zone 2 (see also Eling 1987; Hecker and Hecker 1990; Kosok 1965). The surviving segment of this road is approximately 275 meters long, 13 meters wide, and is oriented southeast/northwest (bearing = 155 degrees east of true north). The perimeters of the road are defined through the placement of a continuous line of small fist-sized stones – a technique noted for other road segments within the valley as well (Dillehay et al. 2008, 2009, 2010; Dillehay, Kolata, and Swenson 2009). Unfortunately, the preservation of this feature is poor due to both natural erosion, and human destruction associated with modern-day expedient agricultural canals that cross-cut the road. In 2005, a large well was placed in this area resulting in the further destruction of this important feature. No additional road segments were found on the Pampa Mojucape.

Dating the construction and use of this feature is difficult at best due to the general paucity of ceramic material in this area. In addition, the road does not appear to service any known Prehispanic sites within the general area. However, this feature is bisected by a large prehistoric canal near its northern terminus. While this might imply that the road antedates the canal, this may not necessarily be the case. It is difficult to envision this road segment surviving the no doubt intense agricultural activity that occurred on the Pampa Mojucape through at least the Late Intermediate Period as evidenced by the ceramic scatters (see below) located throughout the pampa – especially along the western edge. Therefore, the construction of this road may have occurred at some undetermined point after agricultural activities on the pampa ceased[20].

Domestic Scatters

There are numerous dense domestic scatters found within the Pampa Mojucape – especially along the western edge of the study area. The amount of domestic material within these zones is extraordinary. Ceramics, shell, crab, and bone make up the vast majority of these areas. Architecture, however, is almost never encountered within these same areas, lending further support to the hypothesis that the vast majority of Prehispanic pampa residents were living within perishable structures that disintegrated after abandonment.

The ceramics that are found within most of the Pampa Mojucape domestic scatters (Figure 3.1) generally date to the Late Intermediate Period and are associated with the Chimú and Chimú/Inca occupation of the valley (see Dillehay et al. 1998, 1999, 200; Dillehay, Kolata, and Swenson 2009; Donnan 1997; see Swenson 2003 for typology). In fact, only a few examples of earlier Moche ceramics were recovered from within two general areas – within the northernmost Santonte Zone, and within the western edge of the Pan-American Zone, just north of San Pedro de Lloc. Even within these two areas, Moche ceramics were not encountered in sizeable amounts. Most importantly, absolutely no Late Formative Period ceramics such as those found at Jatanca were found within any of these outlying domestic zones, despite the size and density of the occupation within the architectural core of Jatanca. This somewhat surprising ceramic distribution can be explained in two primary ways. In one scenario, additional Late Formative Period cultures occupied these outlying zones, but evidence of their activity was subsequently destroyed by later agricultural production, domestic occupation, and/or natural phenomena such as ENSO events. It is also possible that,

[20] Paul Kosok (1965) describes this same road segment as being "part of a larger system that linked all valleys between the Chao and Motupe valleys – a distance of about 200 miles" (Kosok 1965:117). He goes on to mention that while the road is identified by the locals as an Inca road, its construction may date to the Early or Middle Moche Period and was certainly used by the Chimú as well.

despite the presence of the Late Formative site of Puemape[21] near the coast (see Chapter 2), the domestic occupation associated with Jatanca was contained largely within the immediate area of the site itself and did not extend very far into the margins of the pampa, resulting in a settlement pattern that was largely achoritic. In light of the fact that Late Formative Period ceramics were not recovered from the large domestic scatters within the heavily deflated domestic zones west of Jatanca, despite an intensive surface survey and surface collection of the area that lasted well over a week, the latter scenario seems most-likely. In addition, the complete lack of Late Formative Period ceramics and architecture within areas that were apparently not disturbed by subsequent Moche or Chimú occupations (i.e. the entire face of Cerros Prieto Espinal and Cañoncillo) would also tend to support the hypothesis that Jatanca was organized achoritically (see below).

Numerous examples of "clod busters" or "doughnut stones" (so-named due to their shape) were found within domestic zones. Clod busters are somewhat enigmatic in terms of their function, but most archaeologists think that they were hafted to the end of a long stick and used to break up clods of earth (but see Eling 1987). Of the many examples of these stones encountered during survey, whole ones tended to be found within agricultural fields, while broken examples tended to be found within domestic scatters. This distribution of whole verses broken doughnut stones might indicate that once broken while being used in the field to prepare earth for planting, they were brought home and reused to grind food-stuffs and/or additional materials for household consumption.

All of the domestic scatters contain small amounts of human bone which would indicate that the inhabitants of these domestic areas were burying their dead within these zones as well (Dillehay et al. 1998, 1999, 2000; Dillehay, Kolata, and Swenson

[21] According to Elera (1998), however, after being destroyed by a possible tsunami, based upon the presence of corresponding ceramics, Puemape was reoccupied during the Late Formative Period. If that was the case, it might indicate that there was either another contemporary independent polity within the area, or that Puemape was used as a base for extracting marine resources such as Donax, fish, and crab that could be consumed within Jatanca (see Chapter 5). Based upon the relatively small size of Puemape when compared to Jatanca, it would seem that the latter scenario is most likely.

2009). These individuals are typically represented by smaller hand and foot bones such as tarsals, metatarsals, and phalanges, some of which are stained a greenish-blue implying that they were in contact with copper. However, only a few examples of actual copper were ever encountered during survey or surface collection.

It is of interest to note that Chris Donnan (1997) conducted a surface collection of diagnostic ceramics within the Cañoncillo area. Unfortunately, he provides no coordinates as to the location of his study area other than to say that it is located,

> …in the area known as Cañoncillo, approximately 100 m east of the *duros* of Cañoncillo, on a sandy hillside at the north margin of an extensive algarroba forest. The site covers the ridge of a sand dune. It is recognizable by the abundant ceramic sherds, shell, and ash on the surface, which contrast sharply with the surrounding sand. The site is oval shaped, measuring approximately 180m N-S by 60 m E-W, and slopes downward from north to south" (1997:30-31).

The results of Donnan's data collection were similar to those obtained by this project from the domestic scatters along the western edge (see also Dillehay et al. 1998-2000). Donnan (1997) reports that almost all of the ceramic material he collected dated to the Late Intermediate Period through the Late Horizon, and was generally domestic in nature. Based upon the number of wasters and the amount of soot and charcoal found mixed throughout the sandy soil, Donnan (1997) argues that the area he surface collected was the remains of a Late Intermediate Period/Late Horizon ceramic workshop. While this might be the case, it should be noted that the pedestrian survey and surface collection undertaken by this project found that all of the domestic scatters surrounding the Pampa Mojucape contained numerous wasters and an abundant amount of carbon mixed deep into the sandy soils. This might indicate that the production of domestic ceramics during the LIP–LH was more of a household undertaking that what Donnan asserts.

Synthesizing the Settlement Data

It needs to be emphasized that the main thrust of this research was not focused upon the recreation of the physical prehistoric environment. To do so would have required extensive input from geologists, geomorphologists, soil experts, and phytolith analysts – to name just a few specialists. Nonetheless, based upon the above data and both survey and site-specific data from prior projects (Dillehay et al. 1998, 1999, 2000; Dillehay and Kolata 2004; Dillehay, Kolata, Pino 2004; Dillehay, Kolata, and Swenson 2009; Donnan 1997; Elera 1998; Eling 1986, 1987; Hecker and Hecker 1990; Ubbelohde-Doering 1966), this project is able to make a few important statements related to the dynamic settlement patterns associated with the study area.

There are three major, sequential cultural occupations within the study area: Jatanca (Late Formative Period), Huaca Colorada (late Early Intermediate Period), and Tecapa (Late Intermediate Period/Late Horizon) all of which are located within the same approximate area of the pampa – especially Huaca Colorada and Tecapa which are literally adjacent to each other (Figure 3.1). While the surface data and Trimble maps suffer from post-occupational taphonomic destruction, a number of important statements related to long-term settlement pattern dynamics of each site can be made.

Jatanca and the Pampa Mojucape Region: Site Location

Based upon its unprotected location within the center of the Pampa Mojucape, the settlement pattern of Jatanca does not appear to have been influenced by any kind of defensive needs, as was the case with other relatively contemporaneous North Coast sites such as Cerro Arena (Brennan 1980, 1982), or the small fortified villages dotted across the pre-urban Chicama Valley which date prior to the terminal Formative Period occupation at Mocollope (Attarian 2009). In fact, while the compounds themselves may have been characterized by relatively restricted access (see Chapter 6), access between and among them appears to have been largely unrestricted. In addition, there is no evidence of Formative Period construction on the western slope or summit of nearby Cerro Cañoncillo, which could have served as a lookout point (Dillehay et al. 1998, 1999, 2000; Dillehay, Kolata, and Swenson 2009; Warner 2006). Furthermore, construction of the adobe-brick walls located to the immediate north appears to post-date Jatanca's occupation. Indeed, the site sits within the unprotected center of the pampa. Had defensive needs been of paramount importance to early residents of Jatanca, it would seem that the site would have been better-located within, or at least adjacent to the foothills of a cerro, as was the case for Cerro Arena in the Moche Valley (see Chapter 2). It should also be noted that the exterior walls of Jatanca are not designed with defense in mind as they lack interior parapets, associated moats, and/or embankments (Topic and Topic 1987). In comparison, many Late Moche sites in the Jequetepeque Valley – especially those located north of the river, are built in defensive positions on the face of cerros and are ringed by walls of a clearly defensive nature (Dillehay et al 1998, 1999, 2000; Dillehay and Kolata 2004; Dillehay et al. 2009; Swenson 2004). Some of the interior walls of these sites had low parapets upon which were systematically placed piles of sling-stones that could be used for defensive purposes (Dillehay et al. 1998, 1999, 2000; Dillehay and Kolata 2004; Swenson 2004).

Long-distance trade and exchange as a major factor in Jatanca's site location also seems unlikely, despite being located within a potentially important area (Dillehay et al. 2004). The Pampa Mojucape is situated just to the south of a major lowland-highland corridor that follows the course of the Jequetepeque River (see Chapter 2). From its lowland location, Jatanca could have served as a node in trade and exchange between the nearby marine coast and the Cajamarca basin (Dillehay et al. 2004). However, neither surface inspection nor excavation has revealed the presence of any artifacts that can be linked to the Cajamarca area; virtually all of the ceramic material from within Jatanca is typical of that found within other North Coast sites or lower Middle Valleys during the Late Formative Period (see Chapter 4; Millaire 2009; Donnan 2009). Finally, evidence for the production, storage, or processing of any kind of exchange good (raw material or finished product) by the residents of Jatanca has yet to be identified. In other words, if Jatanca was involved in any kind of significant trade and exchange with its neighbors (long or short distance), with what, and for what were they trading?

Access to naturally occurring items located around the pampa must have been at least a partial factor in site location. Other necessary raw resources that residents of Jatanca would have had ready access to from their central pampa location include clay for ceramic production, reeds for construction, and stone for tools (see Elera 1998; see also Dillehay et al 2004). Furthermore, Jatanca is located only 12 kilometers from the ocean, which would have provided the site's residents ready access to resources culled from the ocean and allowed them to use the area surrounding Puemape as a potential base of operations. That products from the ocean were important to the residents of Jatanca is obvious based upon the large quantity of donax, crab, mussels shells and fish bones that are encountered on both the surface and the sub-surface contexts of the site (Chapter 5).

Based upon the complex system of irrigation canals that surround Jatanca, it could be argued that the need to effectively oversee agricultural production and maintain irrigation infrastructure was a major factor, if not the major factor, in the decision to locate Jatanca within the unprotected center of the pampa. There is little doubt that agricultural activity was a primary concern to Jatanca's residents as evidenced by not just the site's location and the presence of irrigation canals, but also by the abundance of grinding stones, cooking ollas, and *ralladores* (ceramic grating bowls) that would have been suitable for the processing of domesticated crops (see Chapter 5). As argued above, Jatanca's settlement pattern appears to have been relatively achoritic (but see below) with the vast majority of the population living within and immediately around the monumental core as evidenced by the domestic debris (however, see below). Therefore, by locating the site in the center of the pampa within a canal system fed by the Cupisnique drainage, travel time between the site and the immediately surrounding agricultural fields could have been minimized. Based upon core samples acquired by Tom Dillehay and Mario Pino (personal communication – Dillehay 2010), it can be argued that during the initial settlement of Jatanca the nearby Quebrada Cupisnique carried water on a year-round basis (see Chapter 2). If this was in fact the case, this would also have provided an additional, important incentive to settle within the area as the then-river would have provided water for local irrigation, consumption, construction and provided a critical barrier to northerly dune movement (Dillehay – personal communication 2010).

The canal system that surrounds Jatanca (Figure 3.5) likely predated, or developed in conjunction with much of Jatanca's compound architecture due to the need to have access to water which is necessary for tapia manufacture (see Chapter 2), and perhaps canal sediment used in floor construction (see Chapter 5). Prior to the construction of the canals that serviced Jatanca, the closest source of water would have been the lakes located to the north within the algarroba forest, or the now dry Quebrada Cupisnique (Dillehay - Personal communication 2009). Furthermore, the carbon sample from Canal Cut #2 (see also Chapter 5) that returned a radiocarbon date of 2090±40 BCE (Beta 216932) also demonstrates that at least some portions of Canal Cluster #4 were in use during Jatanca's occupation. The presence of the above carbon sample might also indicate that at least a portion of Canal Cluster #4 was not cleaned and reutilized during the subsequent pampa occupations by the Moche or Chimú – perhaps due to local slope conditions or the cessation of water flow through the Cupisnique drainage.

Unfortunately, time did not permit excavation within the large canals that form the majority of Canal Clusters #1, #2, or #3. Therefore, lacking radiocarbon dates, establishing whether or not significant portions of these clusters were active during Jatanca's occupation is speculative at best. However, if Dillehay is correct and the now dry Quebrada Cupisnique reliably carried water until approximately 200BC-AD200 (Personal communication 2010), then the large *mampuesto* that makes up the southern portion of the canal closest to Cerro Cañoncillo could not have existed prior to the termination of running water within the river bed. In this scenario, at the very least a large portion of Canal Cluster #1 did not exist until long after the abandonment of Jatanca.

When considering the abandonment of Jatanca, the Quebrada Cupisnique may once again have played a significant role. If the Cupisnique River dried up at some point around AD 200-400, this would have allowed sand dunes that had been previously washed away by the active river, to invade the site (Dillehay – Personal Communication 2009). In addition, if the large canals that originated within the Jequetepeque River had not yet been constructed, (which seems highly unlikely), then the drying up of the river within the Quebrada Cupisnique would have hastened the abandonment of Jatanca, which would have been left without a predictable source of water. For whatever reason Jatanca was abandoned, ceramic, excavation, and architectural data demonstrate conclusively that once abandoned, it was never significantly reoccupied. The fact that Jatanca was unable to maintain any kind of a population after the cessation of running water within the nearby Quebrada, may also further underscore the contention that the site was inhabited largely by farmers whose livelihood was dependent upon the presence of a predictable source of water.

As a final note, the presence of an extensive agricultural system affiliated with Jatanca would argue that the presence of a state, or at the very least a highly centralized form of political organization, is not a prerequisite to the construction and maintenance of large-scale public works. In fact, as Chapter Eight will argue, Jatanca may have been sociopolitically organized in a far more “horizontal” manner, perhaps along lines of extended kinship, or lineage (see Chapter 8).

Jatanca and the Broader Jequetepeque Valley

While the results of this survey (Proyecto Jatanca) identified Jatanca as the only Late Formative Period settlement within the Pampa Mojucape, Pampa del Guereque, and Pampa de Pitura region, other Formative Period sites have been located within the Jequetepeque region. Between 1997 and 2001, Tom Dillehay and Alan Kolata conducted a total survey of the lower Jequetepeque Valley[22] along with portions of the lower middle valley, and identified several sites that were at least partly comprised of a Formative Period component that varied in time from the Early to late Formative

[22] This author took part in these surveys between the years of 1997-1999.

Period[23] (Dillehay et al. 1998, 1999, 2000, 2001; Dillehay et al. 2009). These 13 sites, chronologically identified through a combination of surface ceramic collection and expedient architectural mapping are as follows (see Dillehay; et al. 2009 for details):

Table 3.1 - (Adapted from Dillehay et al. 2009)

Site #	Cultural Affiliation	Approximate Location
Je 313	Salinar, Chimú	North of Quebrada Olitares
Je 317	Formative (?), Late Moche, Chimú	South of Pacasmayo
Je 331	Salinar. Chimú	Southwest of Cerro Murcielago
Je 372	Salinar (?), Chimú	Southwest of Cerro Murcielago
Je 698	Late Formative, Late Moche	East of Cerro Faclo
Je 706	Formative	Middle Valley (Monte Grande)
Je 718	Late Formative, Late Moche, Lambayeque, Chimú	Upper Lower Valley (Limoncarro)
Je 737	Formative, Chimú	Middle Valley
Je 740	Formative, Chimú	Middle Valley
Je 741	Formative, Chimú	Middle Valley
Je 746	Formative, Late Moche, Late Intermediate Period	North Valley (near Limoncarro)
Je 748	Early to Middle Formative Period	North Valley (near Limoncarro)
Je 1025	Formative	South Valley on coast (Puemape)

Based upon surface data, diverse activities likely occurred at these sites including funerary (313, 737), ritual (317, 331, 748), and residential practices (698, 706, 718, 741, 746). In addition, some sites were observed to be multifunctional such as Je 1025

[23] Some sites (Je 313, 331, and 372) were identified as having a "Salinar" component. While the actual chronological position of the Salinar varies from North Coast valley to North Coast valley, within the Jequetepeque Valley, this culture-group would be chronologically associated with the terminal portion of the Late Formative Period.

(Puemape), which was identified as being the location of residential, administrative, and mortuary activities (see also Elera 1998; Hecker and Hecker 1990). Relative to Jatanca's terminal Formative Period occupation, these sites identified by Dillehay and Kolata within the broader Jequetepeque Valley are important for a number of reasons.

First of all, these settlement data indicate the nearby presence of Formative Period sites along the southern portion of the Middle Valley – just outside of the survey limit of this project. Previous survey (Ravines 1982, 1985) and excavation (Tellenbach 1986) efforts concentrated their energy on the north side of the Jequetepeque River, resulting in a somewhat skewed view of valley-wide settlement during this crucial period of occupation just prior to initial developments at Jatanca. The presence of nearby antecedent Formative Period settlements such as Je737, 740, 741 may suggest that some of Jatanca's initial settlers could have originated from the middle valley (see also Chapter 9), in addition to the nearby coastal site of Puemape (Je-1025) - provided they were occupied *prior* to the founding of Jatanca around 500BC (see Chapter 5).

Establishing the contemporaneity, however, between Jatanca and other lower valley Formative Period sites on the north (Je 698, Je 718, Je 746 and Je 748), or south (Je313, Je 317, Je 331, and Je372) of the Jequetepeque River is somewhat speculative. Chronologically, Jatanca was occupied during a relatively short period of time during the Late Formative Period. Indeed, in many respects, Jatanca is best-described as straddling developments that occurred during the terminal Formative Period through the earliest incarnations of the Early Intermediate Period. Therefore, the occupation of lower valley sites such as Je 718 (Limoncarro – see above) and associated satellite sites (Je 746 and Je 748) likely antedate activities at Jatanca by hundreds of years (see Chapter 2). Furthermore, it would appear that the Limoncarro was abandoned during the time that Jatanca was occupied, only to be occupied once again after Je 1023 was deserted. With this in mind, interaction between the two sites was likely to have been nonexistent or underdeveloped at best. However, the exact chronological placement of other

Formative Period sites such as Je 313, Je 317, Je 331[24], Je 372, and Je 698 relative to Jatanca is presently unknown as excavations aimed at the acquisition of carbon samples were not carried out at these locations. Furthermore, the lack of a robust ceramic collection from these sites, similar to that made at Jatanca (see also Chapter 4), prevents the interpretation of possibly more precise chronological relationships.

Yet, it seems highly unlikely that Je 1023 is the only Late Formative Period site within the lower Jequetepeque Valley and that many of the Formative Period settlements identified by Dillehay and Kolata (Dillehay et al. 2009) were occupied contemporaneously with Jatanca. Indeed, the lack of ready evidence indicating the presence of additional terminal Formative Period-early Early Intermediate Period sites may be due to large-scale landscape destruction associated with long-term re-occupation, agricultural development, erosion, and dunation (see Chapter 2; see also Dillehay 2001, Dillehay and Kolata 2004; Eling 1987; Hecker and Hecker 1990; Moseley et al 2008). In light of the architectural data base of the region, the sprawling north valley site of Talambo is defined in part by numerous tapia-based constructions, the date of which is currently unknown (personal observation 2004). In addition, there are several badly destroyed, free-standing, small-scale, compound-style structures to the north of Jatanca on the Pampa de Pitura and Pampa del Guereque that are also made of tapia (see also Dillehay, Kolata, and Swenson 2009; Hecker and Hecker 1990). The ceramics associated with these structures, however, appear to date largely to the Late Intermediate Period (Lambayeque and Chimú culture), with some examples of Late Horizon, Inca-style ceramics also noted (Dillehay and Kolata 2009; Warner 2006). The lack of concordance between the tapia-based architecture and the Late Intermediate Period ceramics within the Pampas Guereque/Pitura area could be explained as due to the presence of later agricultural and settlement activity that surrounded earlier, long-abandoned Late formative Period structures. Yet this too is a highly speculative scenario as it is also possible that tapia was used sporadically throughout the long

[24] Excavations were undertaken within Je 331, but carbon samples were not subsequently processed (Dillehay, Kolata, and Swenson 2009; Swenson 2004).

occupation of the Jequetepeque Valley and that the tapia structures within this zone were built by Late Intermediate Period residents.

If the lower valley sites identified by Dillehay and Kolata (Dillehay et al. 2009) were occupied contemporaneously with Je 1023, then the identification of Jatanca as a largely isolated settlement with few to no neighbors would be incorrect. Given their location, Je317, along with the previously-mention Puemape (Je 1025) could have provided marine resources for the occupants of Jatanca. Je 331 and Je 372, located adjacent to a large bog area, could also have provided the residents at Je 1023 with resources such as reeds for basket making, roofing, and watercraft production. If this was in fact the case, it could be argued that Jatanca was an important administrative center within the south, and perhaps north, Jequetepeque Valley (Dillehay et al. 2009). However, as with the chronological placement of the Pampa de Guereque/Pitura sites, synchoritic, inter-site relationships such as these are somewhat speculative, but need to be addressed in the immediate future.

Late Formative Period Settlement Patterns in other Valleys

When comparing the Late Formative settlement pattern at Jatanca with that of other North Coast valleys, a number of interesting similarities and differences can be found. For example, the nearby site of Mocollope, located within the northern portion of the Chicama Valley, underwent a series of changes leading to urban conditions during a period spanning the terminal Formative Period through the beginning of the Early Intermediate Period, or about 200BC through AD 10 (Attarian 2003, 2009). Initially (about 200BC), pre-urban, terminal Formative Period sites (PRACh93, PRACh-112, PRACh-114, and PRACh-115) were generally located within sheltered areas of the lower upper valley within defensible locations – a situation similar to other valleys (Santa, Moche, Virú) during the same approximate period of time (Attarian 2009; see also Billman 1996; Millaire 2009; Willey 1953; Wilson 1988). That site defense was a major consideration in geophysical location is substantiated by the presence of tapia walls that ringed the down-slope portion of many of the villages (Attarian 2009). That these sites were Gallinazo (or at the very least pre-Moche) in occupation is evidenced by the lack of Moche ceramics within the assemblage, and the presence of Formative Period types such as Salinar red on white, Castillo Incised, and Castillo Modeled (Attarian 2003, 2009; see also Chapter 4). According to Attarian (2009), these sites were independent farming communities that were concerned primarily with both village and canal defense. The identification of the aggressor has, to date, not been possible (Attarian 2009).

Just prior to the spread of Moche pottery throughout the Mocollope area, Attarian (2003, 2009) noted that many of the agricultural villages were abandoned while the population at Mocollope concurrently increased at a rapid rate as evidenced by the construction of new habitation areas over previously undeveloped areas of the site located exterior to earlier tapia fortifications. Attarian argues that this rapid expansion is likely due to the influx of new settlers to the site – settlers that had previously occupied the upper lower valley fortified sites. Attarian has identified the expansion of the Moche state from the south as having been at least partially responsible for this rapid shift in Chicama Valley settlement patterns (2009). However, this is not to say necessarily that the Moche "invaders" occupied Mocollope, as according to Attarian, within the Chicama Valley, "…the Gallinazo were an existing cultural tradition from which (or upon which) a very distinct elite artistic style developed, recognizable as the Moche styles of pottery and architecture" (2009:77). In other words, later developments associated with the Moche culture were developed from an already existing Gallinazo foundation.

Within the Virú Valley, work by Jean-Francois Millaire (2009, 2010) at the site of Huaca Santa Clara, has resulted in yet another, somewhat later (occupation = 10BC through AD670), picture of Gallinazo settlement patterns. Huaca Santa Clara is located along the southern bank of the middle valley portion of the Virú Valley, and is composed of a series of adobe platforms that surround the flanks of a low-lying hill (Millaire 2009). Access into residential portions of the site was made via baffled entries (Millaire 2009), which along with the hillside location of the site, may imply a defensive nature in overall site organization. The identification of facilities that were suitable for the storage of agricultural produce may indicate that the site was a local administrative node within the Gallinazo polity centered at the Gallinazo Group (Millaire 2009). In addition to the presence of large amounts of Castillo Incised and Castillo Modeled wares, negative resist wares were also encountered during excavation, indicating that the site had a Gallinazo component (see also Chapter 4).

According to Millaire's (2009) interpretation of both site-specific and regional settlement data, the Virú Valley was never "conquered" in the traditional sense of the word by a multi-valley Moche state. Instead, the region was composed of competing "city-state-like polities" located so as to take advantage of resources within a particular region, with some valleys containing only one regional polity, while other valleys were politically more fragmented. Yet all of these city-states were of a similar cultural origin (Millaire 2009; see also discussion on *Norcosteño* ceramics in Chapter 4).

When compared, the settlement patterns of Jatanca, pre-urban Mocollope and Santa Clara have some interesting similarities and differences. All three study areas contained large amounts of Castillo Modeled and Castillo incised ceramics, along with negative reduced wares, the latter of which are argued to represent the presence of Gallinazo elites and a signature of broader Gallinazo culture (Donnan 2009; Millaire 2009). All three sites also appear to have been located within areas that were amenable to irrigation agriculture and were composed of a population made up primarily of farmers, although Attarian has noted the presence of incipient urbanization and craft specialization at Mocollope (Attarian 2009).

However, the similarity between the three sites largely ends at this point. For example, while both terminal Formative Period Mocollope and Santa Clara were located within defensive locations and were further protected by either tapia walls (Mocollope) and/or restricted access into residential areas (Santa Clara), Jatanca was located within an open pampa and not surrounded by defensive walls. It should be noted, however, that while Jatanca itself was not placed within a defensive location, the presence of irrigation canals that surround all sides of the site might indicate a concern on the part of the local farming population to protect the integrity of the irrigation system and the crops that were being produced.

Also of interest is the fact that much of the population of both Jatanca and Mocollope may have originated from smaller farming communities located up-valley from the littoral. Within the middle Jequetepeque Valley, numerous Formative Period sites have been identified along both the north (Dillehay et al 2009; Ravines 1981, 1982) and southern bank (Dillehay et al 2009) of the river. While their exact chronological relationship to Jatanca has yet to be determined, based upon similarities in ceramics (see chapter 4) and monumental architecture (see Chapter 9) it seems likely that at least some of Jatanca's initial settlers may have come from this nearby region. While Attarian has argued that a similar shift in the Chicama valley population was at least partially the result of unspecified Moche encroachment, this cannot be the case for Jatanca, which appears to have been settled some 300 years prior to the population redistribution seen in the Chicama Valley (see Chapter 5 for detailed discussion of radiocarbon dates). Indeed, chronological differences between the three sites would also explain why there are no Moche ceramics found within the Jatanca assemblage, a situation which is not the case with either Mocollope or Santa Clara, both of which contain an abundance of later Moche finewares (Attarian 2009; Millaire 2009). In the case of Jatanca, the site was abandoned most likely due to environmental factors such as the cessation of predictable water flow from the Quebrada Cupisnique along with the related encroachment of barchan dunes throughout the northern portion of the Pampa Mojucape (Dillehay and Kolata 2004; Dillehay et al 2004; Dillehay – Personal Communication 2010; see also Chapter 2), long before the Moche culture entered the archaeological record of the Jequetepeque Valley, either as a conquering force (Moseley 1992; Shimada 1994), or as an encroaching presence in the manner described by Attarian (2003, 2009) and Millaire (2009, 2010).

Huaca Colorada

When compared to Jatanca, where detailed surface collections (see Chapter 4) and excavations (see Chapter 5) were undertaken, understanding the dynamics associated with Huaca Colorada's settlement pattern is much more difficult (Swenson et al. 2009, 2010). However, the factors considered by initial settlers in the location of Huaca Colorada may have been similar to those in play hundreds of years earlier at Jatanca. For example, Huaca Colorada's placement within an open portion of the pampa does not appear to have been influenced by defensive needs. Furthermore, the walls located to the south appear to have been the result of activity that dates to the Late Intermediate Period (see below) and are thus unrelated. While Huaca Colorada appears to be elevated, this is only true for the southern portion of the mound as the northern sector grades seamlessly into ground level, indicating that the entire huaca may sit on a large rise (see topographic map Swenson et al. 2009). Given the lack of a wall enclosing the northern perimeter of the site, it seems dubious that Huaca Colorada's position is due primarily to any kind of a defensive need.

Instead, it could be argued that the decision to place the site on this rise less than two-kilometers to the north of Jatanca was due, once again, to a combination of environmental and agricultural concerns. It is possible that at the time Huaca Colorada was settled by the Moche, Jatanca may have been inundated with sand dunes – an obvious cautionary lesson for any group contemplating the construction of a site within the Pampa Mojucape area. By placing the *huaca* and site upon the summit of a rise, Huaca Colorada's initial settlers were able to stay up out of the path of most of the large dunes, which today cover vast portions of most of the open northern pampa. From this elevated vantage point, they were also able to easily oversee agricultural production across a large area of the northern Jatanca Zone and perhaps modify agricultural production in response to dune movement (Dillehay 2001; Dillehay and Kolata 2004; see also below). In addition, this put residents in close proximity to the eastern Tecapa zone, which has remained largely free of any barchan dune activity, and the lakes to the north. The selection of this location may also have been a logistical decision as it is possible that irrigation canals that passed through the Tecapa *Portachuelo* and around the north side of Cerro Santonte were either constructed, or undergoing initial construction in response to the drying up of the Quebrada Cupisnique (Dillehay – Personal communication 2010).

In addition, the residents of Huaca Colorado were also able to take advantage of the agricultural infrastructure that had been built by those residing within Jatanca during the Late Formative Period. Even if the irrigation canals were in a state of disrepair at the point during which Huaca Colorado was first occupied (and it seems likely they were) settlers were still able to take advantage of at least some of the thick layer of organic sediment that had been laid down by earlier agricultural activity, only a fraction of which is present today in the form of the *yardang* fields (see Chapter 2). Already developed infrastructure and natural resources such as these must have been regarded as "valuable" – at least initially - by those at Huaca Colorado and Tecapa in that it potentially reduced initial "costs" such as labor associated with canal construction and soil enrichment. Once back on-line, nearby irrigation canals could have been expanded and used as an aid in broader site and settlement formation during the Early Intermediate Period by supplying water necessary for the manufacture of adobe bricks and domestic consumption.

Based upon the density and distribution of Moche ceramics, Huaca Colorada had a large support population living in close proximity to the site (Dillehay et al 2009; Swenson et al. 2010). In turning attention to the surrounding hinterland, one should remember that all of the same taphonomic caveats discussed in the case of Jatanca apply to the Early Intermediate Period and Huaca Colorada as well. Despite the post-occupational destruction of settlement data, when examining the location of the Moche domestic scatters it would seem at first glance that Huaca Colorada was perhaps not as achoritically organized as was Jatanca as there were some small pockets of Moche ceramics discovered during regional mapping (Dillehay et al. 2009; Warner 2006). One of these scatters was located within Zone 1 south of the Pan-American Highway near San Pedro de Lloc and the other was located within the northern portion of Zone 3.

However, while both of these pockets were associated with relic agricultural fields and small feeder canals, no standing architecture was located within the vicinity. While it is possible that the Moche domestic ceramics are the final remnant of small villages of farmers living within the agricultural hinterland, overall, data to support this scenario are lacking.

Finally, based upon an examination of surface ceramics, once abandoned Huaca Colorada was not reoccupied by later groups such as the Chimú[25]. The lack of Late Intermediate Period ceramics on this mound is especially surprising since it sits adjacent to Tecapa and is the highest point within the general area.

Tecapa

Tecapa is not the only large Chimú site within the Jequetepeque Valley (Dillehay et al 2009). Additional sites used by the Chimú to oversee valley administration include Farfan (Keatinge and Conrad 1983; Mackey 1982; but see also Mackey 2006), Algarrobal de San José, Talambo (Keatinge and Conrad 1983), and Pacatnamú (Donnan and Cock 1986; but see also Donnan and Cock 1997). As the only major Chimú site on the south side of the valley, Tecapa undoubtedly played an important role in the vertical and horizontal organization of the southern valley's agricultural output. But why was Tecapa placed immediately adjacent to Huaca Colorada?

As with Huaca Colorada (Swenson et al. 2009, 2010), the lack of excavation data from Tecapa hinders our ability to answer this question with any kind of certainty. However, some statements can be made. For example, the location of Tecapa on flat ground, as opposed to a slope such as Huaca Colorada, may have been due to canons of Chimú architecture that required administrative compounds to be built upon flat ground and not upon undulating topographies (Conklin 1990; Czwarno 1990; McEwan 1990; see also Chapter 9). In addition, by locating Tecapa adjacent to Huaca Colorada, the

[25] Excavations initiated by Proyecto Jatanca/Huaca Colorada in 2009 confirm this initial impression. Despite having opened some six large units on the summit of Huaca Colorada, no evidence of Chimú reoccupation in the form of ceramics or architectural remodeling has been discovered (Swenson, Chiguala, and Warner 2010).

abandoned site could still be used as a platform from which agriculturally-oriented observations could be made. As with early residents at Huaca Colorada, the Chimú were able to take advantage of the already existing agricultural infrastructure and nutrient-rich soils that covered the pampa. Finally, this location afforded compound residents, or those living in close proximity, easy access to the nearby seasonal lakes.

The major difference between settlement pattern organization during the Late Intermediate Period and the preceding periods is that Tecapa was organized synchoritically as evidenced by the dense domestic scatters located throughout the pampa, and especially along the western edge of the study zone (Dillehay et al. 1998, 1999, 2000, 2009; Dillehay and Kolata 2004; Warner 2006). These scatters are filled with the refuse of domestic habitation and indicate that large support populations, perhaps much larger than those associated with either Jatanca or Huaca Colorada, were living and working within Tecapa's hinterland agricultural fields (Dillehay and Kolata 2004; Dillehay et al. 2009). By contrast, there is very little Late Intermediate Period domestic debris within the immediate vicinity of Tecapa's architectural core, despite the presence of numerous, well-preserved *surcos* (Dillehay et al. 2000). In addition, it appears as though these support populations could be mobilized to undertake large-scale work projects such as repairing extensive damage to monumental architecture caused by ENSO events (Dillehay 2001; Dillehay et al 1998, 1999, 2000, 2009; Dillehay and Kolata 2004).

By the time of the Chimú occupation at Tecapa, it seems highly likely that the physical layout of the Pampa Mojucape canal system reflected the implementation of an "anticipatory response" system that developed from a sophisticated knowledge of environmental perturbations acquired over a long period of time (Dillehay and Kolata 2004). Tom Dillehay and Alan Kolata (2004) argue that part of the significance behind the replication and configuration of Pampa Mojucape canals represents an attempt to minimize the negative impact of environmental perturbations such as ENSO events and/or waxing dunation. In other words, in the event of a large El Niño, it is possible that some of the canals, especially those in the southwestern portion of the pampa away from the Quebrada Cupisnique, might avoid major damage and large-scale irrigation agriculture might be resumed in this area fairly rapidly. During periods of heavy dunation, replicated canal segments could be opportunistically shut off or brought back on-line in order to irrigate agricultural fields as the barchan dunes moved through the area (Dillehay 2001; Dillehay and Kolata 2004).

Within areas where surface preservation is good and archaeological visibility is high, clusters of large, redundant, parallel canals can be found. For example, there are three parallel canals within the southwestern portion of the pampa that are separated by between (approximately) 115 and 150 meters. As determined with aerial photos, the width of largest active sand dunes measured over the last few years can be as wide 75 meters, but are usually much smaller. Therefore, within the area of the three parallel canals, a single large dune would be able to shut down only one line, leaving the other two open to irrigate the vast majority of the field. However, if the agricultural field was supplied by only one major canal, a single large dune could conceivable shut down operations for an extended period of time since the path of the migrating dune generally runs in the same direction as the canal. It could be argued that this redundant patterning of canals represents the results of a simple form of cost/benefit analysis examined in light of long and short-term environmental scenarios. In other words, it was decided that the costs associated with constructing and maintaining the redundant agricultural features were justified based upon the benefit of being able to conduct relatively uninterrupted agricultural activity within the Pampa Mojucape (Dillehay and Kolata 2004).

According to archaeologists, geologists, and hydrologists who have specifically analyzed taphonomic changes within the southern Jequetepeque Valley (Dillehay and Kolata 2004; Dillehay et al 2004; Eling 1987), dune activity on the Pampa Mojucape fell into a lull at some point after Jatanca was abandoned, only to reassert itself sometime prior to AD1500. The increase in dune activity was coupled with a general increase in aridity that may have been at least partially responsible for the abandonment of Tecapa and its surrounding agricultural activity at some point during the Late Horizon.

Conclusion

This chapter reports upon the results of regional mapping activity conducted within the Pampa Mojucape area during the fall of 2004. Maps were used to identify four diverse ecological zones: The Pan-American Zone, Jatanca Zone, The Santonte Dune Field Zone, and the Tecapa Zone. Within these zones are numerous constructed features that date from the Formative Period, up through relatively modern times. From these features, numerous broad-based statements related to the changing settlement pattern of the pampa could be made:

1. The selection of the geophysical location for the three primary sites was probably based upon agricultural and environmental concerns, likely indicating that farming was an important task organized and administrated by all three major sites (Dillehay et al. 2009).
2. Environmental fluctuations associated with ENSO events, the cessation of predictable access to water from the Quebrada Cupisnique, and dunation may have played a key role in site abandonment (see also Dillehay 2001; Dillehay and Kolata 2004; Dillehay et al. 2004; Dillehay et al 2009).
3. Mapping indicates that the pampa was used extensively for agricultural production throughout the last 2500+ years of human occupation (see also Eling 1987; Dillehay et al. 2009; Hecker and Hecker 1990).
4. The establishment of a contemporary relationship between Jatanca and Canal Cluster #4 indicates that the presence of a centralized system of sociopolitical organization was not necessarily a prerequisite for large-scale construction projects (see Chapter 8).
5. Some of the initial populations at Jatanca likely came from the middle Jequetepeque Valley (see also Chapter 9).
6. While the settlement pattern associated with Jatanca appears to have been somewhat achoritically organized, it was most likely the paramount node in a

small administrative network that incorporated a series of much smaller sites from which it could acquire resources such as reeds, marine resources, and additional raw materials. The major economic focus of the site, however, was to oversee local agricultural production.

7. Neither Jatanca nor Huaca Colorada was significantly reoccupied once abandoned.
8. Tecapa appears to have been synchoritically organized.
9. Irrigation agriculture – especially as practiced during the Late Intermediate Period - may have developed around a strategy of anticipatory response that could be employed to mitigate damage from Enso events and excessive dunation (Dillehay 2001; Dillehay and Kolata 2004)

The above data indicate that the Pampa Mojucape underwent a series of complex changes during the some 2500 years that it was inhabited by residents of the monumental sites of Jatanca, Huaca Colorada, and Tecapa. These regional data, when combined with ceramic analysis (Chapter 4), excavation results (Chapter 5), and architectural analysis (Chapter 6; but see also Chapters 7-9) will provide a more detailed picture as to the sociopolitical organization and ritual activities of Jatanca. Ultimately, these data will be used to examine the role Jatanca may have played in the development of architectural canons used by later Chimú at both urban centers such as Chan Chan, and within their regional North Coast administrative centers as well.

Chapter Four: The Ceramics

Introduction

This chapter will focus upon describing the collection of ceramics that were recovered from within Jatanca's (Je-1023) architectural core. Specific areas of focus include the chronology, cultural affiliation, and function of the Late Formative Period assemblage. All three of these North Coast ceramic-related topics have seen some discussion in the past (Bennett 1939, 1950; Collier 1955, Ford and Willey 1949; Strong and Evans 1952), but of recent, have seen little publication (Fogel 1993; Millaire 2009) – especially when compared to the attention lavished upon the study of mortuary assemblages associated with later North Coast groups such as the Moche, Lambayeque, and Chimú (Bourget 2001; Castillo 2001; Cordy-Collins 2001; Donnan 1978, 1990, 1992, 1997; Donnan and McClelland 1999; Lockard 2009; McClelland 1990; Millaire 2009; Russell et al. 2001; Shimada 1990, 1994; Uceda et al. 2004).

Yet the ceramic collection associated with Jatanca is also an invaluable source of information, despite being composed primarily of a surface collection that combined both systematic and unsystematic collection strategies (see Sinopoli 1991; Rice 1987). Indeed, most of the following discussion is based upon the surface collection made during the 2004-2005 field season as very few ceramics were recovered during excavation[1] (see Chapter Five). Nonetheless, they provide an important source for cross-checking the chronology and cultural affiliation of Jatanca with other North Coast valleys (such as the Virú – see Bennett 1939; Collier 1955; Fogel 1993; and Strong and Evans 1952) and cultural affiliations. This chapter will first examine the historical development of the Late Formative Period ceramic typology typically employed by Andeanists. The resulting culture history will be examined and compared to data from Jatanca in an effort to better understand the complex chronological development of the

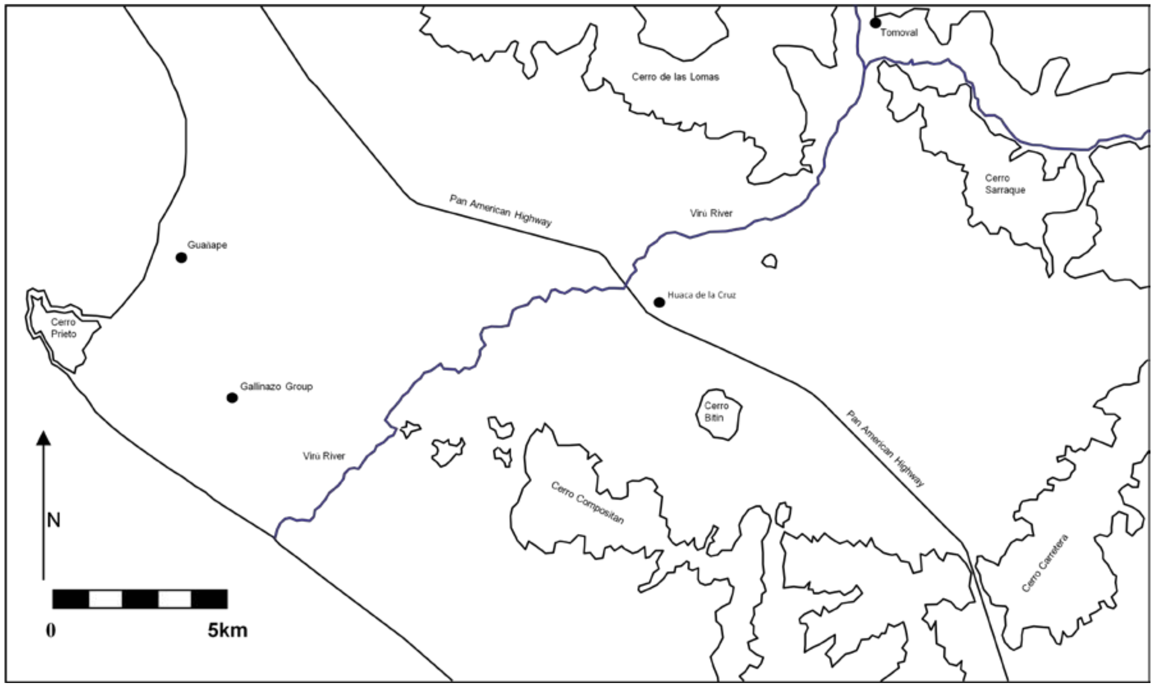
[1] During the 2007 field season, no complete vessels were encountered within archaeological context, despite having excavated approximately 100 square meters of floor area (Swenson, Chiguala, and Warner 2008). During the 2008 field season, however, several relatively complete Late Formative Period vessels were recovered from Compound I/Unit #3-08 (see Swenson, Chiguala, and Warner 2009).

North Coast in general and Jatanca specifically. The relationship between the architecture and ceramics of Jatanca will also be examined in an effort to better understand architectural function and chronological development. The local ceramics can also be used to compile a general ceramic profile (i.e. form, function, decoration) that can be compared to other North Coast data bases. Finally, some possible future directions in Late Formative Period ceramic analysis on the North Coast will be suggested.

The Development of the North Coast Formative Period Ceramic Typology

The development of a North Coast, Formative Period ceramic sequence was primarily the result of an extraordinary amount of multi-disciplinary cooperative work initiated in 1946 by Wendell Bennett, William Duncan Strong, Julian Steward, and Gordon Willey under the organizational name of the *Virú Committee of the Institute of Andean Research* (VCIAR). The vast majority of the work undertaken by this group was conducted within the relatively small Virú Valley (Figure 4.1) – located to the south of the Moche Valley – and published in a series of coordinated reports (see Bennett 1939, 1950; Collier 1955; Ford and Willey 1949; Strong and Evans 1952; Willey 1953).

Figure 4.1 – Virú Valley (Redrawn and Modified from Collier 1955)



Work from other scholars (see Collier 1955; Kroeber 1926, 1930, Larco-Hoyle 1946, 1948) gathered from other North Coast Valleys such as the Chicama and Moche were also incorporated within the material published by the VCIAR. Work in the Virú valley eventually resulted in the following developmental sequence (Table 4.1) that compares the local ceramics with those from other North Coast Valleys. Column 1 gives the ceramic designation generally used within the Moche, Chicama, and Jequetepeque Valley, column 2 provides the Virú Valley-specific designation, while column three provides the approximate time period for which each culture is associated.

Table 4.1 – Virú Valley Ceramic Sequence (adapted from Collier 1955:24)

Moche-Chicama	Virú	Time Period
Inca-Chimú	Estero	Late Horizon
Chimú	La Plata	Late Intermediate Period
Coastal Tiahuanaco	Tomoval	Middle Horizon
Mochica	Huancaco (Late Mochica)	Early Intermediate Period
Mochica	Gallinazo	Early Intermediate period
Negative (Virú de Chicama)	Gallinazo	Late Formative Period through EIP
Salinar	Puerto Moorin	Late Formative Period
Cupisnique	Middle and Late Guañape	Middle Formative Period
Plain Pottery Period	Early Guañape	Early to Middle Formative Period
Preceramic (Huaca Prieta)	Cerro Prieto	Early Formative Period

While the aim of VCIAR was broad in scope and included settlement pattern survey (see Willey 1953) and ethnographic work as well, this chapter will focus primarily upon the ceramic data generated by the project. Before joining VCIAR, Wendell Bennett had already worked extensively along the North Coast and had published a short monograph that described some of his findings from the Virú, Moche, Chicama, and the Lambayeque Valleys (1939). This monograph, which deals almost exclusively with mortuary-based data, examined North Coast ceramics in an attempt to refine the ceramic chronology. In terms of chronological development as measured by changes in ceramics, Bennett incorrectly argued that the Gallinazo culture (see Chapter 2) developed after the Early Chimú[2] - a problem he corrected in his 1950 publication. Of greatest interest here is that Bennett identified a possible trade connection between adjacent, earlier, highland Recuay polities (see Chapter 2) and the Gallinazo based upon similarities in their ceramic assemblages (1939). According to Bennett (1939), both groups used similar forms (stirrup spouts[3], conical handled dippers, spout and handle to

[2] At the time of publication, "Early Chimú" was the terms used by most Andeanists to describe cultural material now generally referred to as "Moche." These cultural developements were initially centered within the Moche Valley.

[3] However, it should be emphasized that Bennett (1939) recognized that not all stirrup spout forms were shared by the two groups. For example, the Recuay form, "Tri-Spout and Bell Form Lip" was evidently not used by the Gallinazo.

bird head) that were constructed in a similar manner (hand-made). Most importantly, the Gallinazo people used what Bennett argued was a "simplified" form of surface treatment known as "negative resist painting"[4] (see below). The exact nature of the contact between highland/lowland groups in the Virú Valley was not clearly defined, but Bennett did state that, "…in spite of strong connections, the Gallinazo site does not represent a direct coastal branch of any known Recuay period" (Bennett 1939:73). Highland/lowland interaction as a means of understanding ceramic developments along the North Coast is an issue to which this chapter will return below.

In 1950, Bennett published the results of his extensive excavations at the Gallinazo Site (V-59), located within the north side of the lower Virú Valley (see also Chapter 2). This publication focused on both the architectural (see Chapters 2 and 3) and ceramic development of this key site, which also served as the type site used in defining the Gallinazo culture. Using architectural features such as floor sequences and associated ceramics, Bennett (1950) was able to divide the Gallinazo period of occupation at V-59 into three major "sub-periods" (from earliest to latest): Gallinazo I, Gallinazo II, and Gallinazo III. By utilizing this scheme, Bennett was able to identify key ceramic developments as expressed at the Gallinazo Group. For example, he noted that some of the plain wares such as Gloria Polished Plain and especially Castillo Plain – dull orange, coil-produced with fine sand inclusions - were commonly used throughout all three Gallinazo phases, making up as much as 60% of the total assemblage during Gallinazo I (see below), and tapering in popularity slightly to make up only 40% of the total ceramic assemblage by Gallinazo III. This ceramic continuity led Bennett to argue that within the Virú Valley, the Gallinazo persisted "with internal changes but no major interruption" for a "considerable" period of time. Indeed, the percentage of decorated wares[5] to non-decorated wares varied little over the span of the three sub-periods (Gallinazo I = 3%; Gallinazo II = 2.3%; Gallinazo III = 4.7%), further underscoring a certain sense of cultural stability as reflected in ceramics. However, some changes, such as the

[4] Bennett's (1939) "Negative A" type.

[5] Bennett defined this broad category as "all forms of surface modification by painting, both positive and negative, incision, punch, modeling, appliqué, and the like" (1950:73).

increased use of broad-line incising and lugs near the end of the Gallinazo III sub-phase did occur (Bennett 1950). In addition, within the lowest levels of excavation Bennett (1950) identified the presence of small amounts of what he called "Pre-Gallinazo" wares such as Huacapongo Polished Plain, Ancon Polished Black, Guañape Coarse Plain, Guañape Red Plain, and Guañape Black Plain that did not continue far into the Gallinazo I sub-phase. These ceramics, along with a characteristic white-on-red type (known within the Virú Valley as Puerto Moorin) were identified as having been produced by the preceding Salinar[6] culture (see Chapter 2), and will be discussed below in detail as these types also occur within Jatanca. With regard to the surrounding valleys (especially the Moche) Bennett argued that, "the Gallinazo style, at least, is found outside the *Virú* Valley, but its relationship elsewhere to local periods and to the *Virú* center is not yet too clear" (1950:18). Nevertheless, the general North Coast sequence of Salinar followed by Gallinazo and then Moche was well-established by this point in time.

James Ford (1949) examined the surface collections associated with visible architecture throughout the Virú Valley which resulted in a publication containing all of the rim form types that were generally used by other members of the VCIAR. The bulk of his work largely avoided the inclusion of mortuary wares excavated from burials, but at times he did note the results of work conducted by other ceramic specialists, such as Larco-Hoyle (1948) who dealt specifically with such material.

Ford also argued that the Guañape Period was the time during which ceramics were first introduced into the Virú Valley based partially upon data collected from site V-71, where it was found that Early Guañape ceramics were lying directly above a Preceramic horizon (1949). According to Ford (1949), these ceramics also compared favorably with published material depicted from the "lower levels" of highland Chavín de Huántar and the Chicama Valley (Larco Hoyle 1941), demonstrating the potentially wide distribution of similar Formative Period ceramics throughout central-northern Peru. Of special interest is that the ceramics are not "primitive" in their appearance, but appear to have been introduced from elsewhere, and therefore, did not originate in

[6] In the Virú Valley, the "Salinar" culture group is identified as "Puerto Moorin" based upon their manufacture and use of a highly characteristic red-on-white pottery of the same name.

situ[7]. Yet, perhaps somewhat contradictorily, Ford describes the first pottery in the Virú Valley as generally, “poorly controlled in firing” with “little variation in vessel form” and relatively minor surface elaboration save vertically oriented appliquéd ribs and sparse modeling (1949:62).

With regard to the earliest ceramic assemblages, another ceramic pattern of interest noted by Ford is the difference in domestic and mortuary wares. He comments that in addition to domestic wares, ceremonial and mortuary wares first appeared in a “well-developed” state and were likely made by specialists (1949). The average percentage of this material within Ford’s surface collections never exceeded 4% (Ford 1949). Furthermore, “common utility types,” which were likely made by the “common people” were typically not used for mortuary purposes (Ford 1949).

As with Bennett (1939), Ford was sympathetic to the hypothesis that many of the features associated with Gallinazo ceramics had been introduced from the neighboring highland Callejón de Huaylas region (Recuay) based upon the presence of similarities in form and surface treatment – especially negative resist. In addition some Recuay pieces were recovered from Gallinazo period middens and burials (ford 1949). Ford also considered the possibility that at least some of the influence exerted over Gallinazo ceramics had come from the north of the Virú Valley based upon the reemergence of reduced, highly-polished black-wares. He stated:

> “…that throughout Gallinazo times a center distant from Virú predominated in reduced-fired blackware and exerted a small but persistent influence on the Gallinazo period ceramics. Possibly this influence came from the coast to the north, perhaps from a yet undescribed coeval cultural stage in the Lambayeque Valley” (1949:65).

Further backing this contention of external ceramic influence from the north of Virú was that during the Huancaco Period, there was a rapid increase in mold-produced

[7] Ford was sympathetic to the idea that North Coast ceramics may have been introduced from Central America.

blackwares – a ceramic type that was more commonly used in the valleys to the north (Bennett 1949; Ford 1949).

Whereas Bennett (1950) was interested in establishing accurate estimates of occupation length, William Duncan Strong and Clifford Evans (1952) were not. Instead, they focused upon delineating relative chronologies through the analysis of ceramics (both domestic and mortuary wares) collected both from a series of stratigraphic cuts located within middens, and from burials associated with a series of sites throughout the Virú Valley. Relying upon the form typology created by Ford (1949), Strong and Evans were especially concerned with defining and studying the earlier end of the ceramic sequence, or the period of time that spanned the use of Guañape through Gallinazo ceramics (1952; see also Collier 1950; Ford and Willey 1949). Working at V-59, they confirmed Bennett's contention that there was a Salinar component at the site based upon the presence of Puerto Moorin ceramics near the bottom of their cut. Puerto Moorin ceramics were also found at the bottom of the important upper-lower valley Tomaval site (V-51), with sequential layers of Gallinazo and Huancaco (Moche) ceramics superimposed above[8].

At the site of Huaca de la Cruz (V-162), Strong and Evans noted that the domestic wares associated with the Gallinazo and Huancaco Phase occupations remained largely the same; the vast majority were Castillo and Valle Plain, with a slight increase in the amount of Tomaval Plain (see Ford 1949 and Strong and Evans 1952 for descriptions). The decorated wares – many of which were associated with mortuary activity - however, changed completely, with negative resist wares, a hallmark of the Gallinazo culture, disappearing altogether (1952). This was interpreted as indicating that the "common people" that had made up the social substrate of the Gallinazo occupation persisted under "Mochica rule or influence" (Strong and Evans 1952). In other words, while there may have been a significant change associated with elite and mortuary activity, the "culture patterns," manufacturing process, and stylistic canons associated with domestic wares remained largely unchanged within the Virú Valley.

[8] Strong and Evans (1952) argue that Tomaval is primarily a Gallinazo site despite the presence of earlier and later ceramic material.

When comparing their Virú Valley results with ceramics from other surrounding North Coast valleys (Moche[9] and Chicama), Strong and Evans (1952) agreed with Ford (1949), and concluded that the earliest known ceramics in the Virú Valley are Guañape[10], date to the Formative Period, and "were apparently closely related" to the Cupisnique ceramics that had been identified by Bird in the upper levels of Huaca Prieta, and Larco Hoyle (1941, 1948) within Formative Period graves in the Chicama Valley. As with Bennett (1939, 1950), Strong and Evans (1952) also noted that the Early Guañape ceramics appear within the stratigraphy as an already remarkably well-developed assemblage, leading them to also speculate that the actual development of ceramics had occurred first elsewhere. The point of origin, however, remained a mystery, as did many other key aspects of Formative Period ceramics. Indeed, the authors stated that at the time of publication little was known about the early ceramics from valleys north of Chicama, but note that Larco Hoyle (1941, 1948) had recovered numerous early ceramics from the Quebrada Cupisnique, located to the immediate south of Jatanca (see Chapter 2). In fact, Strong and Evans used the close proximity of the Quebrada Cupisnique to the Jequetepeque Valley to argue that a relatively late "Chavinoid culture" had existed within the Jequetepeque Valley, thereby explaining the presence of "spoiler" ceramic pieces (i.e. Early Guañape ceramics within Puerto Moorin levels) found within the Virú Valley and Pacatnamú (see Ubbelohde-Doering 1966; see Chapter 3).

Like Strong and Evans, **Donald Collier** (1955) also gathered ceramic data from both deep cuts placed within site middens, as well as from mortuary ceramics. Unlike Strong and Evans, however, Collier was more concerned with identifying changes in "later period" Virú Valley sites – essentially from the Gallinazo through the Inca period, and then using these changes to "measure culture change." As with the other scholars above, Collier (1955) argued that the Gallinazo were largely a local Virú Valley development where plain wares dominated the assemblage. Collier also echoed Bennett's (1950) contention that there was quite a bit of stylistic continuity between the

[9] Strong and Evans (1952) use the place-name "Santa Catalina Valley" for what is today commonly known as the "Moche Valley."

[10] But see also Larco-Hoyle 1948.

Gallinazo Sub-Phases I-III, “as, for example, most of the Gallinazo II vessels continue to be popular during the initial phase of Gallinazo III” (1955:67).

While it was not necessarily his major focus, Collier (1955) provided an excellent discussion of the cultural dynamics within the Virú Valley during the early years of cultural occupation, beginning with Early Guañape, which he broke down into three major sub-phases: Early, Middle, and Late. In general, like his other VCIAR counterparts, Collier tended to see far more continuity and gradual change in sequential ceramic forms and styles than differences, or radical changes during the Formative Period (1955). Collier also notes that by the Middle Guañape, several valleys such as the Supe and the Chicama shared many of the same ceramic types and surface decorations (zoned punctate, broad-lined incising, etc…. (see below). The combination of an apparently gradual ceramic transition within the Virú Valley and the simultaneous wide distribution of Guañape-style ceramics were apparently somewhat difficult for Collier (1955) to reconcile, as he believed that gradual ceramic change implied a “purely local, internal development.” However, this hypothesis was somewhat difficult to support in the face of parallel ceramic developments that were occurring contemporaneously within other coastal valleys, indicating the likely inter-valley spread of design elements. Indeed, Ford (1949; see also Willey 1943) had noted the possibility that the Puerto Moorin white on red surface treatment (see below) had originated within the Chancay Valley, where this form of decoration was better represented within Late Formative Period ceramic collections.

Ceramic shifts during the Late Guañape (seen in general by Collier as a time of “transition”) were accompanied by simultaneous shifts in settlement patterns and economies as well, as sites began to be settled away from the ocean in favor of more in-land locations. That these later sites were often surrounded by irrigation canals underscored a concomitant change in the local economy, as agricultural products were evidently emphasized over marine resources[11] (Collier 1955).

The *Virú Committee of the Institute of Andean Research* did an extraordinary job of gathering and publishing data relevant to the ceramics of the Virú Valley. It could be argued that with the possible exception of the Chan Chan/Moche Valley Project of the 1970's, no other region of Coastal Peru has since seen this level of institutional support, archaeological cooperation, cross-disciplinary organization, and final publication. At this point, ceramic data collected from the above projects can be compiled and used to examine the ceramics within Jatanca. It is hoped that by comparing the Formative Period ceramics in Jatanca with those from the Virú Valley, an increased understanding of North Coast culture history and ceramic development can be achieved.

Ceramic Attribute Benchmarks by Sub-Phase

The above works by Bennett (1939; 1950), Ford (1949), Ford and Willey (1949), Strong and Evans (1952), and Collier (1955) provide detailed information as to the changes in sub-phase-specific ceramic attributes (form and surface treatment), which can be used to compare the chronological and cultural occupation at Jatanca and supplement data acquired through radiocarbon dating. The following ceramic attributes, selectively culled from the above sources, have been considered to be time-sensitive developments, or "benchmarks," of locally-produced ceramics during the Formative through Early Intermediate Period within the *Virú* Valley, and are presented in chronological order of development (see also Chapter 2). Examples of ceramic attributes and types are provided below. However, for detailed ceramic descriptions related to form and surface treatment, see Ford (1949) and Strong and Evans (1952).

Early Guañape Period

[11] Willey argues that large-scale agriculture did not originate along the coast until the Puerto Moorin Phase. But as Collier (1955) points out, the presence and location of large sites dating to the Chavín Horizon in the Casma and Nepeña Valley may indicate that irrigation agriculture was introduced within other valleys at an earlier time (Middle Guañape) than was the case in the Virú Valley, meaning that the stimulation for irrigation agriculture within the Viru Valley came from without.

According to all of the above-discussed VCIAR archaeologists, the Early Guañape[12] constitutes the earliest ceramic horizon within the Virú Valley (but see also Larco-Hoyle 1943), and with the exception of the use of ceramics, differed little in terms of cultural organization, complexity, or subsistence economy when compared to the earlier, local Cerro Prieto culture (see discussion by Ford 1949 and Strong and Evans 1952). During this time, ceramics tended to be thin-walled, manufactured via coiling, tempered with grit, and poorly fired (Collier 1955; Ford 1949). Within midden deposits, blackwares were twice as common as redwares (Collier 1955; Ford 1949). In general, there was very little in the way of surface elaboration (Ford 1949), with one major exception: vertically applied appliqué ribs that were either pinched or incised (Collier 1955; Ford 1949). Some modeled wares are also known from this early period in ceramic production (Collier 1955; Ford 1949). Near the termination of this phase, Guañape Punctate and Ancón Fine-line Incised appear (Strong and Evans 1952).

The ceramic types used during this initial ceramic phase were primarily Guañape Black Plain, Guañape Red Plain, and Guañape Coarse Ware[13] (Ford 1949; Strong and Evans 1952). All three of these types were manufactured by hand modeling and were used through the very early Puerto Moorin period, with Guañape Black Plain and Guañape Coarse Ware disappearing a bit earlier than Guañape Red Plain (Ford 1949; Strong and Evans 1952). All three types were generally poorly fired, pervious to water, and represented largely through the recovery of small fragments (Strong and Evans 1952). In general, these vessels took the form of simple jars with constricted mouths and open bowls.

In terms of chronologically sensitive ceramic developments, the Early Guañape sub-phase is noteworthy for:

[12] The Early Guañape Period corresponds to the Cupisnique culture in the Chicama Valley (Strong and Evans 1952).

[13] According to Strong and Evans (1952) the Guañape type-series is distinguished by the use of coarse paste, poorly controlled firing, and generally poor polishing and decorating – especially when compared to the slightly later Ancón type-series.

1. The appearance of vertical ribs (pinched or incised)
2. The earliest appearance of Guañape Punctate and Ancón Fine-line Incised
3. The appearance of Guañape Plain Black, Guañape Plain Red, and Guañape Coarse Ware

Middle Guañape Period

The Middle Guañape[14] ceramic period is especially noteworthy for the tremendous increase in pottery decoration when compared to the Early Guañape, as measured by an increase in the proportion of decorated to non-decorated sherds (Collier 1955), and marks the beginning of the consistent use of many surface modifications such as polishing, broad-line incising, brushing, engraving, and zoned punctating (Strong and Evans 1952). Many specific types appeared at this time such as Ancón Polished Black, Ancón Zoned Punctate, Ancón Brushed, Ancón Engraved, Ancón Broad-line Incised, Guañape Gouged, and Guañape Zoned Punctate (see Collier 1955; Ford 1949; Strong and Evans 1952). In addition, mold-made pottery, evidently used exclusively for mortuary purposes at this early juncture, began to appear (Collier 1955; Ford 1949). While not made from clay, it is also worth noting that stone bowls also made their first appearance within the Virú Valley at this time (Collier 1955; Strong and Evans 1952).

It appears as though no new type-series were introduced during the Middle Guañape, with Guañape Black Plain, Guañape Red Plain, and Guañape Coarse wares continuing to be used (Strong and Evans 1952). At this approximate point, Guañape Black Plain made up about 60% of the total assemblage, while Guañape Red Plain made up the bulk of the remaining material. Guañape Coarse Ware never made up a significantly large percentage of the total type-series population (Strong and Evans 1952).

In terms of chronologically sensitive ceramic developments, the Middle Guañape sub-phase is noteworthy for:

[14] The Middle Guañape Period corresponds to the Cupisnique culture in the Chicama Valley (Collier 1955).

1. The introduction of mold-produced pottery
2. The consistent use of surface treatment techniques such as polishing, broad-line incising, brushing, engraving, and zone punctating
3. The introduction of specific types such as Ancón Polished Black, Ancón Zoned Punctate, Ancón Brushed, Ancón Engraved, Ancón Broad-line Incised, Guañape Gouged, and Guañape Zoned Punctate
4. The introduction of stone bowls and/or drinking vessels

Late Guañape Period

During this period, thin-walled, well-fired redwares increase in popularity relative to blackwares until the former outnumber the latter by approximately 2 to 1 (Collier 1955; Ford 1949). In general, vessels tended to increase in size during the Late Guañape Period, and new forms were introduced including stirrup spout vessels (used primarily for mortuary purposes), neckless *olla*s ("egg-shaped vessels"), jars with wide mouths and "neatly folded rims," and small pots with short vertical necks (Ford 1949). On the other hand, the presence of bowls with pronounced shoulders decreased greatly (Ford 1949). There were two major developments in surface treatment during the Late Guañape Period: use of Huacapongo Polished Plain - a technique where leather-hard vessels were scraped resulting in a series of parallel lines (see below), and the increased use of zoned pottery decoration (Collier 1955; Ford 1949; Strong and Evans 1952). Indeed, during this sub-phase, surface treatment types underwent tremendous amounts of flux. Many earlier surface treatment types such as Guañape Finger Pressed Rib, Ancón Brushed, Ancón Engraved, and Ancón Modeled were not typically found during the terminal Guañape Period, and seemed to disappear altogether before the onset of the subsequent Puerto Moorin Period (Strong and Evans 1952). Other types that were used during the two preceding ceramic periods continue to be used in the Late Guañape Period, including Guañape Incised Rib, Guañape Modeled, Guañape

Punctate, Guañape Zoned Punctate, Ancón Fine-line Incised, Ancón Broad-line Incised, and Ancón Zoned Punctate (Strong and Evans 1952).

The major type-series developments at this stage were the introduction of Huacapongo Polished Plain, which Strong and Evans (1952) and Ford (1940) argued was an offshoot of Guañape Red Plain, and Ancón Polished Black. Huacapongo Polished Plain was handmade, tempered with small amounts of sand, and well fired – resulting in hard, strong ceramic vessels (primarily jars) that were used through the termination of the Middle Gallinazo sub-period (Strong and Evans 1952). The Ancón Polished Black assemblage was typically made up of bottle, short-necked jars, and some bowls. This series-type was also the "stock" upon which decorations were applied, resulting in the formation of decorative types such as Ancón Incised, Ancón Zoned Punctate, Ancón Engraved, and Ancón Stamped (Strong and Evans 1952). In addition, Guañape Black Plain disappeared near the termination of this sub-phase, while Guañape Red Plain, and Guañape Coarse Ware continued to be manufactured, although in greatly reduced amounts than had been the case during the Middle Guañape Period (Strong and Evans 1952).

In terms of chronologically sensitive ceramic developments, the Late Guañape sub-phase is noteworthy for:

1. The discontinuation in use of Guañape Finger Pressed Rib, Ancón Brushed, Ancón Engraved, and Ancón Modeled
2. The introduction of Huacapongo Polished Plain
3. The introduction of Ancón Polished Black

Puerto Moorin

While there are some minor disagreements regarding the identification of, and interpretations related to, the Virú Valley ceramic types by the VCIAR authors (see Bennett 1939, 1950; Collier 1955; Ford 1949; Strong and Evans 1952; Ford 1949; Ford and Willey 1949; Willey 1953), on one point they all agree: ceramics dating to the

Puerto Moorin Phase[15] were woefully underrepresented when compared to other cultures and periods. As a result, comparatively little is known about their development or use. Based upon midden material, however, some definitive statements could be made. For example, based primarily upon midden material, the transition between Late Guañape and Puerto Moorin was evidently a fairly gradual process, with Puerto Moorin itself constituting a fairly short phase (Collier 1955; Strong and Evans 1952). Specifically, during this phase, single-spout bottles that incorporated a flat handle and vessels that incorporated a figure-and-spout connected by a bridge developed (Ford 1949). From the perspective of cultural identification, perhaps the most important development was the use of Puerto Moorin[16] ceramics themselves, which are easily identified by the presence of geometric white designs on red Huacapongo Polished Plain pottery (Ford 1949; Strong and Evans 1952). Finally, the use of types Castillo Modeled and Castillo Incised began during the terminal portion of Puerto Moorin, but are of much greater importance to the subsequent Gallinazo Period (Strong and Evans 1952).

During the early half of the Puerto Moorin Period, Huacapongo Polished Plain made up as much as 95% of the total material recovered from midden deposits (Strong and Evans 1952). Despite the popularity of this type, three new ceramic types originated during the time period: Sarraque Cream, Gloria Polished Plain, and Castillo Plain (Strong and Evans 1952). All of these types appeared near the end of the Puerto Moorin Period, and were used through at least the Huancaco period (Strong and Evans 1952). Sarraque Cream was a hand-modeled, well-fired type that was typically made into jars that had either funnel-shaped or vertical necks. The most distinguishing feature of this ware is the presence of an uneven cream wash on the exterior of the vessel. Gloria Polished Plain appears to have developed out of the popular Huacapongo Polished Plain, and is distinguished from other contemporary types by its polished, striation-free exterior (Strong and Evans 1952). Gloria Polished is typically represented

[15] The Puerto Moorin ceramic period corresponds to the Salinar culture in the Chicama Valley (Collier 1955).

[16] The cultural phase, "Puerto Moorin" was named after the already-identified ceramic type of the same name. This type is also referred to as "White-on-Red Puerto Moorin" (see Ford 1949; Collier 1955; Strong and Evans 1952).

within assemblages by small, short-necked jars and flat-based bottles (Strong and Evans 1952). Castillo Plain, like the preceding Huacapongo Plain, became the major type-series during the period (in this case, Gallinazo) that succeeded its initial development. This type is characterized by the use of hand-modeling combined on occasion with coiling that was used to reinforce the rim (Strong and Evans 1952). Typical forms include jars with short and long necks, large "egg-shaped" neckless *olla*s, large "egg-shaped" *olla*s with thickened rims, and small bowls (Strong and Evans 1952).

In terms of chronologically sensitive ceramic developments, the Puerto Moorin Period is noteworthy for:

1. The emergence of Huacapongo Polished Plain as the dominant ceramic type
2. The development of single spout bottles that incorporated a flat handle
3. The development of vessels with figure-and-spout connected by a handle
4. The origination of the decorative types White-on-Red Puerto Moorin, Castillo Modeled, and Castillo Incised
5. The development of the type-series Sarraque Cream
6. The development of the type-series Gloria Polished Plain
7. The development of the type-series Castillo Plain

Early Gallinazo

The Early Gallinazo sub-phase[17] ushered in a number of time-sensitive changes in ceramic production within the Virú Valley, the most important of which was the local manufacture of vessels that used negative resist decorative techniques on their surface, a surface treatment which characterizeed the Gallinazo culture and was used during all three sub-phases (Bennett 1939, 1950; Ford and Willey 1949; Strong and Evans 1952). This period also marked the beginning of the use of appliquéd animal heads (along with some human, or humanoid heads) to jar shoulders (Ford 1949; Strong and Evans 1952). Despite the development of a new cultural period, there were a number of ceramic

[17] The Early Galllinazo corresponds to Gallinazo I (Bennett 1950).

continuities carried over from the earlier Puerto Moorin phase, such as the use of the decorative type White-on-Red Puerto Moorin and the use (albeit greatly reduced) of Huacapongo Polished Plain surface striations (Strong and Evans 1952).

In examining the changes in type-series that mark the beginning of the Gallinazo period, as noted above, the use of Castillo Plain and Huacapongo Polished Plain continued, but in conjunction with the addition of three new forms: Valle Plain, Queneto Polished Plain, and Tomoval Plain (Ford 1949; Strong and Evans 1952). Valle Plain was manufactured by hand, tempered with large amounts of sand, and fired to a generally red finish (Strong and Evans 1952). Forms such as egg-shaped jars with rectangular thickened rims were by far the most popular form, followed by large jars with vertical or incurved rims, globular vessels with long necks, plates, and bowls (Strong and Evans 1952). Vessel thickness is the criteria on which this type is distinguishing from Castillo Plain, with the former being significantly larger and having thicker walls (Strong and Evans 1952). Generally, Queneto Polished Plain jars were built by hand modeling with some coiling used around the neck and rims, but bowls appear to have been mold-produced (Strong and Evans 1952) – perhaps as a means of expediently producing large numbers of standardized forms. Typical forms included numerous types of bowls along with some small, short-necked jars, all of which were finished by exterior polishing (Strong and Evans 1952). Finally, Tomoval Plain, while not frequently encountered until the subsequent Huancaco (Moche) Period, was also introduced during the incipient Gallinazo Period. These ceramics were hand-modeled with some coiling used to reinforce rims, and are associated with forms such as numerous bowls and small jars (Strong and Evans 1952). In addition, it has been noted that during this time there was a rapid increase in the number of bowl-shaped graters (*ralladores*) recovered from middens (Ford 1949; Strong and Evans 1952), perhaps as a response to an increase in maize growth, processing, and consumption.

In terms of chronologically sensitive ceramic developments, the Early Gallinazo sub-phase is noteworthy for:

1. The appearance for the first time of Negative Resist surface treatment
2. Application of animal and human face to the shoulder of jars
3. The disappearance of Huacapongo Polished Plain
4. The introduction of Valle Plain, Queneto Polished Plain, and Tomoval Plain
5. Mold production for some bowl forms
6. A significant expansion in the use of *ralladores* (bowl-shaped graters)

Middle Gallinazo

The Middle Gallinazo sub-phase,[18] is perhaps best characterized as a period of relative continuity in ceramic decoration and form. Ceramic change during this time did not take the form so much of innovation in decoration and invention of new types, but rather consisted in changes in the relative proportion of already existing ceramic canons of design (Ford 1949; Strong and Evans 1952). For example, the already developed Valle Plain increased in use until it became a major type (about 25% of total midden ceramics) that would continue to be used through the Late Gallinazo sub-phase and into the subsequent Huancaco Period (Moche) as well (Ford 1949; Strong and Evans 1952). Castillo Plain also continued to be used in large amounts and reached a high point of 70% of all ceramic refuse deposits (Collier 1955). Decoration, such as the use of painted geometric designs associated with Puerto Moorin ceramics also continued to be used. Furthermore, while the use of collared jars predominated during the Middle Gallinazo, spout and bridge, and spout and handle types were also still being used (Bennett 1950). Bennett (1939, 1950), who was instrumental in developing the parameters of this particular sub-phase, noted that some specific ceramic innovations such as spout and bridge to bird head vessels and double jar vessels (double-chambered) could be traced to the Middle Gallinazo sub-phase.

The spout and bridge to bird head vessels are especially noteworthy, as they are among the few Gallinazo vessels that utilized a naturalistic form. While the vessels varied, they can be generally characterized as being composed of a mold-produced bird

[18] The Middle Gallinazo subphase corresponds to Gallinazo II (Bennett 1950).

that has a rounded, tapering spout appended to the bird's back. This spout is connected to the bird's head via a strap handle that could have served as a convenient way to hold the vessel (see Bennett 1950: Plate 8; Figure H). Double jar vessels are also noteworthy, as many of these were composed of both a globular chamber and a hollow, modeled decorative chamber, often depicting what appears to be domestic architecture. The two chambers were connected via a hollow tube that permitted both chambers to be filled with liquid. One of the chambers had a thin tapered spout that permitted filling and drinking from the vessel (see Bennett 1950: Plate 8; Figures D and F).

In terms of chronologically sensitive ceramic developments, the Middle Gallinazo sub-phase is noteworthy for:

1. The appearance of spout and bridge to bird head vessels
2. The appearance of double jar vessels

Late Gallinazo

As with the Middle Gallinazo, most of the earlier ceramic forms and designs carried over into the Late Gallinazo period as well[19] (Bennett 1950; see also Ford and Willey 1949; Strong and Evans 1952). For example, all of the collar jar forms used during the preceding Middle Gallinazo were present in the Late Gallinazo as well, with the flare-collar form being the most common type encountered (Bennett 1950). Also still in use were double jars and spout and handle jars, which became "characteristic" of Late Gallinazo (Bennett 1950). Decorative types associated with Middle Gallinazo such as appliqués, depictions of bird heads, appliqué strips, and appliquéd appendages were also still in use, as was Gallinazo negative and polished redwares (Bennett 1950). The only major locally produced, style-related development that occurred during the Late Gallinazo Period was the use of clusters of nodes for decoration (Bennett 1950). Three additional changes included the use of "corn poppers" (a round shallow vessel that has a narrow opening and an attached, solid-body handle (see Strong and Evans 1952: Page

[19] The Late Gallinazo corresponds to Gallinazo III (Bennett 1950).

303; Figure 4), the re-vitalization of stirrup spouts, and positive painting, all three of which Bennett (1950) argued were introduced from outside of the Virú Valley by the Moche located to the immediate north.

In terms of chronologically sensitive ceramic developments, the Late Gallinazo sub-phase is noteworthy for:

1. The use of clusters of nodes for decoration developed
2. The appearance of "corn poppers"
3. The revitalization of the stirrup spout form[20]
4. The appearance of positive painting technique

The above ceramic developments in Virú Valley ceramics can be compiled into two major charts that examine major changes in two key areas: Surface Treatment (Table 4.2) and Rim-Body Form (Table 4.3):

[20] According to Strong and Evans (1952), the "revitalization" of the stirrup spout may have occurred somewhat earlier during the Early Gallinazo sub-phase, as some Queneto Polished Plain fragments of this form may have been found within midden excavations. Unfortunately, as the authors state: "…not enough of the sherds of these varieties were found to permit a detailed shape analysis" (Strong and Evans 1952:274).

Table 4.2 - Ceramic Pottery Types by Surface Treatment*

	E.G.	M.G.	L.G.	P.M.	G-I	G-II	G-III	H
Guañape Finger Pressed Rib (y)	X	X						
Guañape Incised Rib (y)	X	X	X					
Guañape Modeled* (n)	X	X	X					
Guañape Punctate (y)	X	X	X					
Ancón Fine-Line Incised (n)	X	X	X					
Guañape Zoned Punctate (y)		X	X					
Ancón Broad-line Incised (y)		X	X					
Ancón Zoned Punctate (y)		X	X					
Ancón Brushed (n)		X						
Ancón Engraved* (n)		X						
Ancón Modeled* (n)		X						
Puerto Moorin White-on-Red (y)				X	X	X	X	
Castillo Modeled (y)				X	X	X	X	X
Castillo Incised (y)				X	X	X	X	X
Gallinazo Negative (y)					X	X	X	X
Carmelo Negative* (n)					X	X	X	
Gallinazo Broad-line Incised (y)					X	X	X	X

*E.G. = Early Guañape; M.G. = Middle Guañape; LG = Late Guañape; P.M. = Puerto Moorin; GI = Gallinazo I; GII = Gallinazo II; GIII = Gallinazo III; and H = Huacaloma

Table 4.3 - Ceramic Pottery Types by Type-Series*

	E.G.	M.G.	L.G.	P.M.	G-I	G-II	G-III	H
Guañape Black Plain	X	X	X	X				
Guañape Red Plain	X	X	X	X				
Guañape Coarse Ware	X	X	X	X				
Ancón Polished Black			X					
Huacapongo Polished Plain			X	X	X	X	X	
Sarraque Cream			X	X	X	X	X	
Gloria Polished Plain				X	X	X	X	X
Castillo Plain				X	X	X	X	X
Valle Plain					X	X	X	X
Queneto Polished Plain					X	X	X	X
Tomaval Plain					X	X	X	X
Virú Plain							X	X

*E.G. = Early Guañape; M.G. = Middle Guañape; LG = Late Guañape; P.M. = Puerto Moorin; GI = Gallinazo I; GII = Gallinazo II; GIII = Gallinazo III; and H = Huacaloma

The above tables reveal a number of interesting general trends related to long-term ceramic dynamics in the Virú Valley. Indeed, there may be a significant break in terms of the continuity of style-related change in ceramics that occured during the

Puerto Moorin Period. Both before and after the Puerto Moorin Period, surface treatment-based types appear to have been of a more continuous, stable nature, as most of the Guañape forms along with Ancón Punctate were developed during the Early Guañape, and were continuously used through the beginning of the termination of the Late Guañape/Puerto Mooring sub-periods. After the Puerto Moorin Period, surface treatment types such as Castillo Modeled/Incised and the Gallinazo types come into use and were used consistently throughout the latter portion of the Late Formative Period, further emphasizing the apparent break in surface treatment-based continuity associated with the Puerto Moorin Period.

In examining the use of type-series, however, there is quite a bit of continuous overlap between the Guañape, Puerto Moorin, and Gallinazo periods. Guañape Red and Black Plain ceramics were first developed during the Guañape Period and were used through the Puerto Moorin Period. Their use overlapped with the development of Huacapongo Polished Plain, the use of which also overlapped with the development of Castillo Polished Plain and Gloria Polished Plain – types that came into florescence during the Gallinazo Period (see also Ford 1949). According to Ford (1949) the continuity seen in type-series indicates relative stability in local population development. However, the sometimes rapid changes in surface decoration may hint toward quite a bit of simultaneous inter-valley exchange coupled with some middle valley influence as well (Bennett 1939, 1950; Ford and Willey 1952; Willey 1953). It should also be remembered that it was during the transition between Guañape and Puerto Moorin that the distribution of settlements underwent tremendous change – not only within the Virú Valley, but along much of the North and Central Coast (Moseley 1975; Willey 1953; see also Chapter 3). Large settlements, which had tended to be located along the coast so as to have ready access to the marine resources that made up a significant portion of their overall subsistence economy (Moseley 1975), shifted to inland locations that permitted ready access to irrigable land, reflecting a new site-wide focus upon irrigation agriculture as the foundation of subsistence (Moseley 1975; Willey 1953). That type-series ceramics used during this cultural/settlement transformation were relatively stable might indicate that changes in settlement pattern were the result of local groups, and not the establishment of lower valley beachheads by displaced or invading middle valley groups. However, changes in style might also indicate that these coastal settlement shifts did not occur within a cultural vacuum, and that perhaps some sites incorporated at least some highland groups within their constituency – a possible scenario alluded to by many of the VCIAR archaeologists (see Bennett 1939, 1950; Ford 1949; Willey 1953).

When comparing Virú Valley ceramics to those at Jatanca, a number of interesting patterns emerge. In general, ceramics from the two regions are remarkably similar in many respects. Specific surface treatments used from the Guañape Period through the Gallinazo Period within the Virú Valley such as Guañape Incised Rib, Guañape Modeled, Guañape Punctate, Guañape Zoned Punctate, Ancón Broad-line Incised, Ancón Zoned Punctate, Puerto Moorin, Gallinazo Negative, Castillo Modeled, Castillo Incised, and Gallinazo Broad-line Incised were all found within Jatanca. In fact, many of the surface treatment types illustrated in Strong and Evans (1952) such as Guañape Incised Rib (letter c on page 280), Guañape Zoned Punctate (letters a and b on page 285), Ancon Broad-line Incised (letters b and g on page 290), Puerto Moorin (letter k on page 299), Castillo Modeled (letters f and h, on page 314 and letter k on page 315), Castillo Incised (letters b, c, f, and h on page 321), and Gallinazo Broad-line Incised (letter l on page 324) are identical to examples found within Jatanca during formal and informal survey (see below).

There are some differences in surface treatment use between the two regions (see below for detailed discussion). Indeed, some types were far-better represented within the Virú Valley than they were within Jatanca. For example, the placement of modeled heads on the shoulders of vessels was evidently far more common in the Virú Valley than it was within Jatanca. In fact, only a handful of modeled heads have been found either during the 2004-2005 field season (see Warner 2006), or subsequent field seasons (see Swenson et al. 2008, 2009, 2010). In addition, the use of Puerto Moorin White-on-Red was also not very common within Jatanca, as only a few examples of this major Virú Valley type have been found. It should be noted that these differences might also be site-specific. Data to support this possibility, however, is currently insufficient.

In fact, the examples of Puerto Moorin White-on-Red recovered from Jatanca may actually represent a local variation of the broader ceramic theme, as the white geometric figures that identify this type are sometimes outlined by careful shallow etching, which is much rarer with the Virú material (see below; Strong and Evans 1952). In addition, the cream slip appears to have been more hastily applied within the Jatanca sample. Early surface treatments such as Ancón Brushed, Ancón Fine-line, and Ancón Engraved have also not been unequivocally identified in large numbers within Jatanca, where Zoned Punctate designs seem to have been much more popular. At the later end of the spectrum, Carmelo Negative ceramics, typically associated with the Gallinazo, have yet to be identified within Jatanca. Finally, with the possible exception of the above-described etch-outlined white-on-red Puerto Moorin variant, in general, there do not appear to be any readily-identifiable Jatanca-specific decorative types that are not also found within the extensive data published by the VCIAR project. Therefore, in some ways, the domestic ceramics from Jatanca can be conceptualized as a sub-set of the larger VCIAR assemblage.

Ceramic types such as Huacapongo Polished Plain, Castillo Plain, Virú plain, and Valley Plain are all present at Jatanca in relatively large quantities and make up the vast majority of the surface material. As with surface treatment types, many specific rim forms illustrated in Strong and Evans 1955 such as Guañape Red Plain type 1 (see page 254), Huacapongo Polished Plain type 5 (page 258), Sarraque Cream type 1 (see page 261), Castillo Plain types 1 and type 2, (see page264), Valle Plain types 1 and type 5 (see page 268), Virú Plain type 1 (see page 270), Queneto Polished Plain type 2 (see page 273), and Tomaval Plain type 3 (page 275) are also found within Jatanca.

Despite these specific similarities, in general, the rim-body form types between the two areas diverge – far more than do the surface treatment types - as there are many forms unique to Jatanca, as well as many Virú Valley forms that are not found within the Jequetepeque Valley. For example, the Jatanca forms Type 2 (a *cantaro*/*olla* -

see below), which is the second most common type in Jatanca, and Type 4 (a bowl - see below), which is the third most common type in Jatanca, are not depicted in the well-illustrated VCIAR publications by Bennett (1939, 1950), Collier (1955), Ford and Willey (1949), Strong and Evans (1952). That Jatanca Type 2 (JT-2) is not illustrated is especially enigmatic as during an informal surface survey of Castillo de Tomaval in 2008, an example of this type was found along the slopes to the northwest of the primary mound. While this example from the Virú Valley was slightly more robust than a typical Jatanca Type 2 sherd, the form was unmistakable, leaving one to assume that this type was not encountered with enough frequency to warrant inclusion within the VCIAR publications. With regard to Type 4, examples of this form were not encountered during an informal survey of either Castillo de Tomoval or the Gallinazo Group conducted during 2008. Again, it must be emphasized that along with Type 1 (*olla*), Type 2 and Type 4 are easily among the most-common domestic forms within Jatanca, so the lack of the latter two types within the Virú Valley is curious. Furthermore, highly narrow tapered spouts with thin round handles that are a consistent yellowish-orange in color (Type 6) are found with regularity in Jatanca (see below), and they are not depicted in any of the VCIAR publications.

It is also of interest to note that neckless *olla*s and also *olla*s with short, inward sloping necks were apparently far more common in the Virú Valley than they were in Jatanca, whereas short-necked constricted mouth *olla*s and short-necked *ollas* with flaring necks, were far more common in Jatanca (see below). Also, while some bowls with rounded sides, shoulders, and relatively flat bottoms have been found in Jatanca, bowls with a well-polished interior that are well-rounded from lip to base are far more common (see below). Long, highly-polished bottle necks with narrow mouths such as those associated with Ancón Polished Blackware (see Strong and Evans 1952 – page 257) and spouts with strap-handles are also not common within Jatanca. Finally, specific types such as “corn-poppers” or stirrup spouts have not been identified within Jatanca.

Ceramic Chronology at Jatanca

The VCIAR archaeologists were able to develop their chronology of Virú Valley ceramics based upon a combination of surface collection (Ford 1949), deep stratigraphic cuts (Collier 1955; Strong and Evans 1952), and opportunistically added mortuary data (Bennett 1939, 1950; see also Larco-Hoyle 1943). The key to understanding ceramic chronological development (especially with regard to the domestic wares) was through the controlled excavation of deep trenches within middens using a combination of natural and arbitrary levels which allowed for the identification of changes in ceramic attributes, from the subtle to the dramatic. Unfortunately, due to the highly deflated soil conditions encountered during the 2004-2005 field season at Jatanca, it was not possible to implement this strategy and recover ceramics from within trenches, as almost all of the artifacts are lying upon desert hard-pan[21] (see Chapter 2 and Chapter 3). As a result, while similarities in both rim-body form-type and surface treatment-type can be compared for presence/absence, the comparison of fine-scale chronology-based ceramic trends between the two regions is not possible[22].

Yet, with regard to Jatanca, a few chronological statements can be made based on the similarity/dissimilarity of the total ceramic inventory as compared to the fine-level chronological scheme developed for the Virú Valley.

1. Most of the earliest ceramics types identified within the Virú Valley (i.e. Guañape, Ancón, Finger-Pressed Ribs, Incised Ribs, etc.…) are present at Jatanca, implying that initial activity at Jatanca also began during the Early Guañape Period.

[21] It should be noted that excavations undertaken by Proyecto Jequetepeque in 1997 near the north end of the Acropolis did encounter an area of stratigraphically deposited ceramics (Dillehay et al. 1998). It is hoped that this area can be reopened again in the immediate future in order to collect time sensitive data related to the ceramics of Je-1023.

[22] It should be noted that during the 2008 field season, four units were placed within domestic context in an attempt to locate intact columns of ceramic refuse. All four of these units reached sterile soil only a few centimeters below the lowest level of surface ceramics due to soil deflation (see Swenson, Chiguala, and Warner 2009).

2. The ceramic types (both rim-body types and surface treatment types) identified for sequential culture groups within the Virú Valley (i.e. Cupisnique to Salinar to Gallinazo) are also present at Jatanca, implying that the site was continuously occupied during the entirety of the Middle-to-Late Formative Period.
3. Based upon the absence of either Huancaco-style ceramics, or local Moche ceramics (see Swenson 2004), Jatanca was likely abandoned before the development of a Moche presence within the Jequetepeque Valley.
4. The absence at Jatanca of ceramic forms strongly associated with the Late Gallinazo sub-phase in the Virú Valley such as "corn poppers" and stirrup spout vessels, and surface treatments such as polychrome painted wares (see Bennett 1950) may indicate that Je-1023 was abandoned sometime prior to this terminal Gallinazo phase. Further supporting this contention is the presence of a large amount of ceramic material that dates in primary use to the Early/Middle Gallinazo sub-phase such as Castillo Plain (Strong and Evans Types 1, 2, and 4); Huacapongo Polished Plain (Strong and Evans Type 5; Ford Types 16 and Type 21); and Valle Plain (Ford Type 10 and Type 3).

To sum: The domestic ceramics found throughout Jatanca are generally similar to those found within the *Virú* Valley[23] and used by cultures traditionally identified as Guañape (Cupisnique), Puerto Moorin (Salinar), and Gallinazo (for Moche examples see Donnan 2009 and Millaire 2009). The similarities and differences between the two ceramic assemblages indicate that the occupation of Jatanca spanned hundreds of years beginning with at least the Middle Formative Period, as identified by the presence of Guañape Ribbed ceramics, and terminated sometime around the Middle Gallinazo sub-phase (as identified in part by the lack of Moche and Late Gallinazo ceramics such as "corn poppers," stirrup-spout vessels, and polychrome painted ceramics). It is worth

[23] In addition, they are also similar to domestic ceramics from other Late Formative Period-Early Intermediate Period sites distributed throughout the North Coast, as evidenced by recent publications by Attarian (2009), Donnan (2009), Franco and Galvez (2009), Millaire (2009), Uceda et al. (2009).

noting that the ceramic-derived chronology is largely supported by the radiocarbon dates acquired by this project (see Chapters 5 and 6) and other projects as well (Dillehay and Kolata 2004; Dillehay et al. 2009; Swenson et al. 2010). However, before beginning the ceramic description and analysis, it is critical to once again (see also Chapter 2) describe the local taphonomy of the Pampa Mojucape – especially as it relates to the surface conditions of the site.

Local Taphonomy and the Resulting Ceramic Distribution and Condition

In addition to periodic ENSO events that have profoundly impacted the North Coast of Peru, (Dillehay et al. 1998, 1999, 2000; Pino 2001; see also Chapter 2), the ceramics found at Jatanca have been subjected to taphonomic conditions perhaps unlike any other within the Jequetepeque Valley as the area is currently inundated by barchan dunes that originate some twenty-miles to the south within the northern Chicama Valley (Dillehay et al 1998, 1999, 2000; Eling 1987; Kosok 1966; Pino 2000; see also Chapter 2). It seems likely that this dune activity has periodically waxed and waned over the two millennia subsequent to the founding of Jatanca (Dillehay and Kolata 2004; Dillehay et al 2009; Eling 1987), and has had a profound impact on the density, distribution, and physical condition of the surface ceramics.

Based upon the south-valley conditions, it seems highly likely that the surface ceramics are periodically shifted, or "smeared" to the north each time a massive dune passes overhead, resulting in the formation of directly superimposed layers of ceramic material in many locations. Indeed, it is of interest to note that the southern border of the ceramic distribution does not extend very far to the south and is instead close to the edge of the compounds. Given the generally northward movement of the ceramics that has occurred throughout the last two-thousand years, it seems likely that the original ceramic distribution may have extended further to the south, while the opposing northern border of the ceramic scatter may have been pushed a bit to the north as well. Unfortunately, this shifting means that the smallest appropriate level of surface analysis is probably that of the site, and that more finely controlled studies, such as those that examine the assemblage at the level of the room, or even the compound, must take into account the poor provenience and general northward movement of the ceramics over time.[24] Furthermore, very few sherds were encountered during excavation within sub-surface locations such as the above-floor fill or on the original use-floor itself[25] (see Chapter 5). Therefore, as determined through extensive excavations within Jatanca (Warner 2006; Swenson et al. 2008, 2009, 2010), in many locations, surface ceramics are "floating" as much as two meters above the original compound use-floor in sterile sand obviously deposited by the periodic passing of the barchan dunes, further underscoring problems associated with fine-grained analysis that attempts to link general ceramic collections with specific architectural features.

In terms of relative density, the area immediately surrounding the compounds – especially the zone between the Acropolis and Compound V – contains one of the densest collections of ceramics within the southern Jequetepeque Valley (see also Dillehay et al. 2009). Much of this density is due to the extraordinary amount of deflation created by the daily winds that blow largely uninterrupted across the pampa, which removes layers of sand between sherds resulting in the deposition of multiple superimposed ceramic layers across much of the site. In general, ceramic density tends to decrease clinally away from the core of the site as one proceeds into the surrounding hinterland. However, even within this outlying zone where the density of ceramics associated with later North Coast groups (especially the Chimú) increase, ceramics dating to the Late Formative Period are visible sporadically on the surface. The ceramic density within compound walls can also vary. In some case, it appears as though intact, east-west walls that rise above the surface level of the sand impede at least some ceramic movement, as ceramics bunch up against the south side of the walls, while the interior of the rooms to the immediate north contain almost no ceramic material.

[24] The only possible exception to this might be the ceramics found within the northern plaza of the acropolis as they are relatively protected by the wedge shaped profile of the southern half of the structure. This is discussed further below.

[25] In 2005, two whole vessels were uncovered during excavation, one of which appeared to be in primary context (a bowl – see Figure 4.26, see also Figure 5.9), and the other which was located within secondary context composed of sterile wind-blown sand (a cantaro – see Figure 5.21) (Warner 2005).

However, formal excavation and sub-surface testing have indicated that these ceramics rest on top of a deep layer of sterile sand, once again calling into question any contextual integrity below that of the level of the site itself (Warner 2006; Swenson et al. 2008, 2009, 2010).

As one might expect given the above taphonomic considerations, the condition of the individual sherds can vary quite a bit. Due to the daily winds and abundance of sand, many surface ceramics have been abraded beyond the point of recognition – even in terms of rim form (e.g., *tinaja*, jar, bowl, *cantaro*, etc…). The vast majority, however, are in good-to-excellent condition.

Attribute Identification and Tabulation

Despite the above taphonomic issues, much can be learned through a formal attribute analysis of Jatanca's ceramics collected from a variety of contexts. Indeed, attribute analysis resulted in the identification of some ten specific rim form-based ceramic types (to date) associated with Jatanca and the immediate surrounding area (see below). Following the work of Swenson (2004; see also Collier 1955; Ford and Willey 1949; Sinopoli 1991; Strong and Evans 1952; Rice 1987), when possible, the following attributes were recorded for all rim sherds collected via systematic surface collection, non-systematic surface collection, and excavation.

Form – Ceramic identification of basic form and implied function based upon the rim profile. The following vessels forms were recorded within the total sample based upon the below criteria (see also Swenson 2004):

Bottle – A vessel with a narrow neck that generally expands slightly near the lip.

Bowl – A container wider than it is deep that does not have a restricted opening.

Cántaro – A vessel that has a relatively narrow neck that flares slightly near the lip.

Olla – This vessel has an opening no less than 10cm in diameter and a generally flaring lip, although an example of a "neckless" *olla* was recovered within the formal collection[26].

Spout – Identified by the presence of a very narrow neck (less than 2cm) that tapers toward the terminal end, with evidence of an attached round handle.

Tinaja – This vessel has a generally wide, unobstructed opening and relatively straight sides and was used for storage and perhaps chicha preparation.

Rim Diameter – An estimated measure of the interior diameter of the vessel's opening. This measurement was made using a standard rim diameter chart.

Vessel (lip) Thickness – This measurement was taken from the vessel lip's thickest portion with a hand-held caliper.

Exterior Surface Treatment (or "surface enhancement") – Any pre- or post-firing decoration applied to the exterior (partial or whole) of a vessel that either penetrates the surface, or is applied over the surface (Rice 1987; see also Collier 1955; Ford 1949; Strong and Evans 1952). The definition and identification of these surface treatments within the Jatanca collection was made through a combination of the literature from the Virú Valley (Discussed above) and more technically-oriented sources (Rice 1987):

Burnishing (typical example = Huacapongo Polished Plain) – a surface finishing technique that is the result of rubbing the surface of the clay with a hard object such as a stone that results in a "lustrous" surface finish. Burnishing can be used to achieve effects such as parallel facets, or a smooth, relatively seamless surface (Rice 1987).

[26] Additional examples of neckless *olla*s were found within the informal collection (see below).

Incising (typical example = Ancón Fine-line Incised) – a cutting technique that utilizes a pointed tool to make lines in the surface of a vessel that is still wet, leather hard, or even after firing (Rice 1987).

Appliqué (typical example = Guañape Incised Rib) – the joining of bits of clay to the surface of a vessel via techniques such as scoring and luting (Rice 1987)

Negative Resist (typical example = Gallinazo Negative Resist) – the use of a temporary protective coat that covers a portion of a vessel over which color is applied. This coating comes off during firing, exposing the background color (Rice 1987).

Slipping (typical example = Puerto Moorin) – the application of a fluid suspension of clay applied in a thin coat prior to firing (Rice 1987).

Punctating (typical example = Ancon Zoned Punctate) – made by impressing wet clay with some kind of an implement (Rice 1987).

Interior Surface Treatment – Any pre- or post-firing decoration applied to the interior of a vessel (see Collier 1955; Ford 1949; Strong and Evans 1952). The criteria for identifying internal surface treatment is the same for external surface treatment (see above).

Exterior Color – The predominant post-firing color (or colors) of a vessel's exterior surface as determined with a Munsell soil color chart. When a range of colors was present, the color value recorded was that of the predominant color. If the interior differed significantly in color from the exterior, its color was also recorded.

Temper – This was an estimated measure of the general amount of non-plastic material that had been mixed in with the clay. It should be noted that in many of the vessels, the amount of temper found within the actual rim could be considerably less than that found within the vessel neck, shoulder or body. Therefore, the following criteria were used to estimate the amount of temper within the below-rim portion of the vessel (see also Strong and Evans 1952; Swenson 2004):

0 = no visible bits of temper within the sherd.

1 = (sand) small, approximately sand-sized particles mixed throughout the sherd.

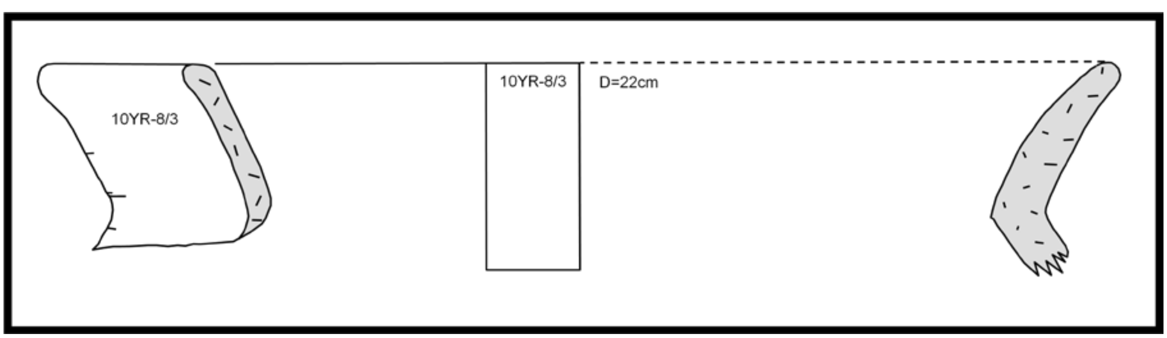
2 = (grit) large angular pieces that visibly pierce the surface of the vessel.

3 = (pebble) dense amounts of large angular pebbles mixed heavily throughout the sherd.

Identification of Ceramic Types at Jatanca

The above attributes were collected from all ceramics acquired through three primary collection methods mentioned briefly above and described in detail below: systematic surface collection, opportunistic surface collection, and excavation. The entire ceramic collection acquired via the below-discussed methods was examined both informally and formally in order to identify the presence of any reccurring types (both rim form and surface treatment) and to better profile the overall ceramic assemblage associated with Jatanca. To date, a total of 10 ceramic rim form types (based primarily upon the recovery of at least 6 examples of a given form) have been identified at Jatanca, along with numerous surface treatment types, many of which were first defined within the Virú Valley (Bennett 1938; 1950; Collier 1955; Strong and Evans 1952; see also further below). The Jatanca rim form types are as follows:

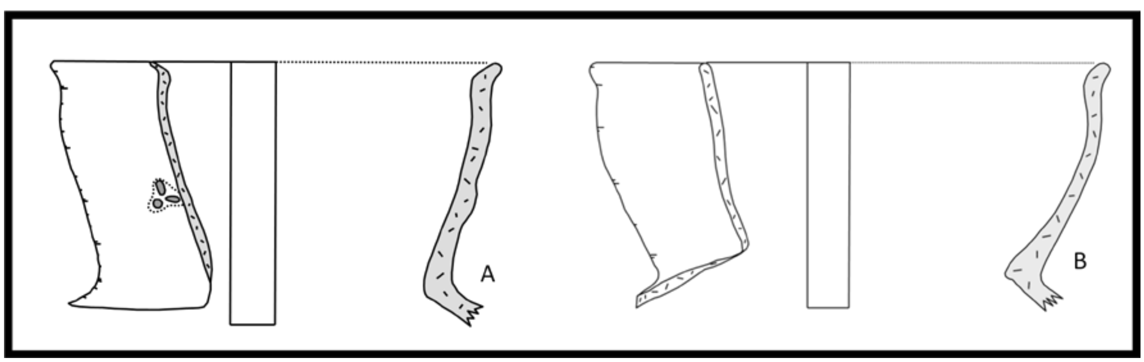
Figure 4.2 – Example Type 1



Type 1 = Olla (Figure 4.2)

This was the most common vessel type within the sample acquired during the controlled surface collection (n=15 or 12%), reflecting the fact that fragments of it are spread liberally throughout the site. It should be mentioned that it is perhaps even a bit underrepresented within the controlled surface collection sample due to the generally small size of the rim sherds that make up the collection. This *olla* has a generally straight rim that flares out from the neck, and a small ridge within the interior at the point where the neck was attached to the body of the vessel. Large pieces of this *olla* are often found covered in soot indicating that were probably commonly used for cooking. From the shoulder up, this vessel is seldom decorated in any way, but larger samples that include portions of the body are sometimes covered in a hastily-applied cream slip. In general, this vessel is fired to a brick-red to brownish-red color (ex = 5YR-5/3). Some fire clouding, however, is often present as well. The temper used in these vessels is almost always relatively fine sand, with only a few slightly larger inclusions.

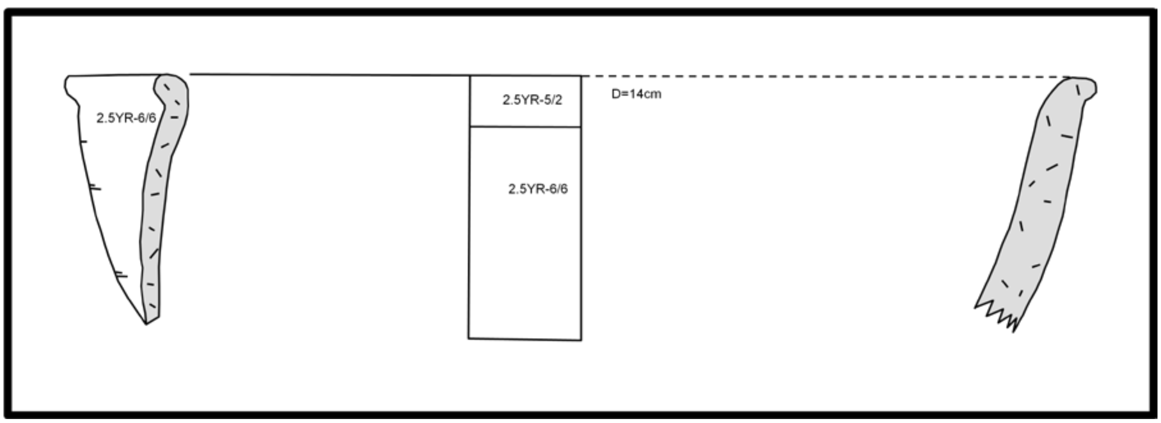
Figure 4.3 – Examples Type 2



Type 2 = Olla/Possible Cantaro (Figure 4.3)

This was the third most common vessel type identified within the sample (n=10 or 8%), but is probably the second most common ceramic form found throughout the site. Type 2 is easy to identify with its combination of an inward sloping lip, uniquely rounded rim, and acute angle created where the rim and the shoulder connect. While this form has been identified as an *olla* based upon soot accumulation on some examples found in the site, it could also have been used as a *cantaro* given that the shape of the lip and rim would aid greatly in the mechanics of pouring (Rice 1987). The paste used to make this vessel is tempered with sand and fired to a generally reddish-brown to light brown color. However, some examples of this type were fired to a yellowish-brown color. The exterior and interior of this vessel are seldom decorated. One example (A), however, was recovered during informal survey that had an appliquéd piece within which was a triumvirate of punctuations. In general, however, Type 2 vessels have a well-smoothed surface.

Figure 4.4 – Example Type 3



Type 3 = Olla/Possible Cantaro (Figure 4.4)

Only one example of this type was recovered (n=1 or 1%) within the controlled surface collection, but other examples have been found during informal surface surveys. It is similar to a type 2, but the lip is well-rounded and flares out slightly near the point of termination. As with type 2, based upon the relatively narrow neck, shape of the rim, and rounded lip, this vessel could have been used as a *cantaro* as well as an *olla*. Unfortunately, large examples of this type that include portions of the body have yet to be found. Therefore, it cannot be said with any certainty if this vessel was used to cook food. While this type is generally undecorated beyond simple exterior smoothing, it should be noted that one example was found during informal survey that had a thin slip applied to its interior lip. Generally, small particles of sand are used to temper this type, although a few larger grains are also found within the broken edge of the sherd. This type is typically fired to a light red (ex. = 2.5YR–6/6).

Figure 4.5– Example Type 4

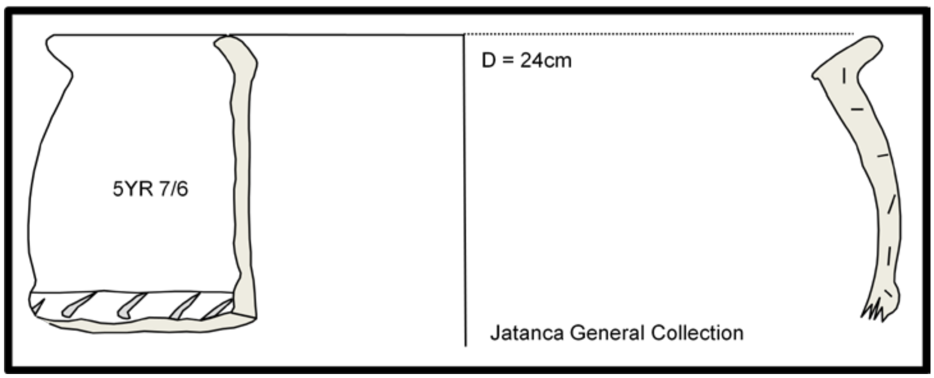
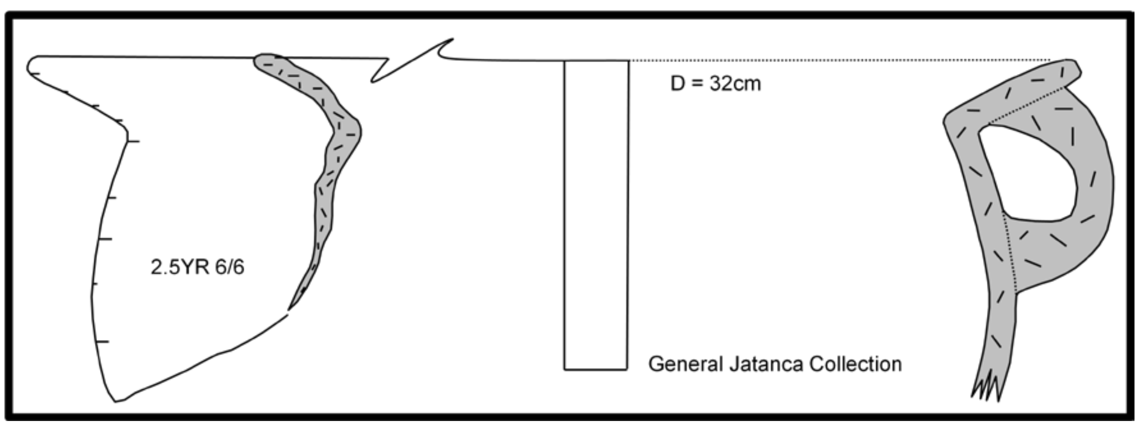


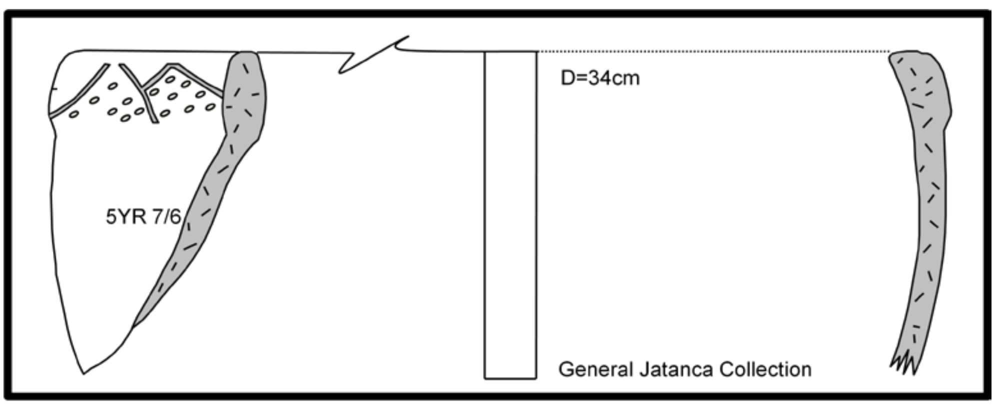
Figure 4.6 – Example Type 4 with Handle



Type 4 = Flaring Rim Bowl (Figure 4.5 and Figure 4.6)

This vessel type is characterized primarily by a rim that flares for a short distance near the lip[27]. The diameter of this vessel can vary. To date, examples of this type have been found that have interior diameters ranging from 17cm up to 32cm. Many examples of this type have an attached handle (Figure 4.6). In addition, numerous examples have decorated (pinched, braided, incised, etc…) modeled strips applied to the exterior body, generally near the vessel's maximal width (Guañape Finger Pressed Rib and Guañape Incised Rib – see Strong and Evans 1953; see also below). The temper used in creating this type tends to be slightly larger than that typically associated with vessels from Jatanca. Other than the exterior strips of modeled clay, the surface of this vessel is generally unadorned. The exterior color of this type tends toward red (ex = 5YR-7/6).

Figure 4.7 – Example Type 5

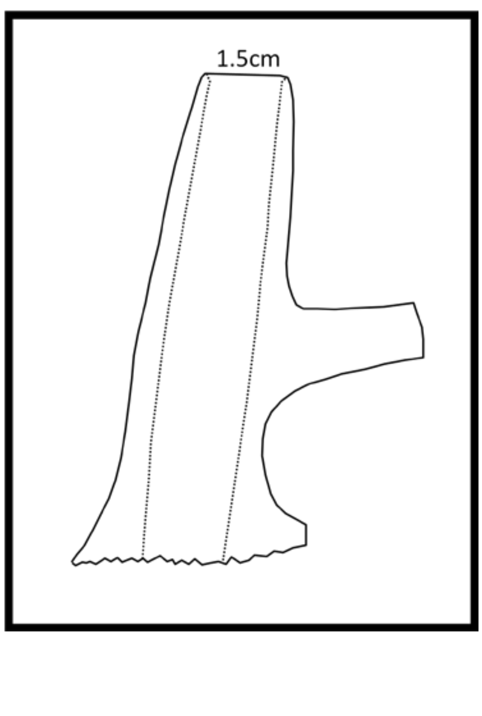


[27] In 2008, a complete example of this type (along with several others) was found during excavation within decidedly ritual context (Swenson, Chiguala, and Warner 2009). This vessel contained organic material that had been lit on fire and allowed to burn for a short while. At some point, the vessel was turned over, thereby depriving the fire of oxygen necessary for the complete immolation of the organic material. As a result, the overturned pot contained thick, dark, oily, organic material that left a perfect negative of the vessel's interior. The significance of this activity remains somewhat mysterious.

Type 5 = Bolstered Rim Bowl (Figure 4.7)

This type is a generally large bowl (diameter generally = 35cms) that appears to have been well-rounded and relatively deep. The rim of the vessel is reinforced with a generally decorated strip of clay that has been added after the bulk of the vessel has been formed – a strengthening technique that is used for many of the *tinaja*s found within Jatanca as well. All of the examples to date have been decorated with a zoned-punctate design. Zoning was achieved via a small, sharp implement that was used to create a series of generally triangular zones, within which are placed numerous punctuations (average range = 7-10 punctations) made with a relatively small, blunt instrument. The decoration associated with this vessel type is always restricted to the rim area and never intrudes into the body, which is given a smooth finish. This bowl is generally fired to a reddish color (ex = 5YR-7/6) and is made with relatively large bits of temper that can include very small pebbles as well.

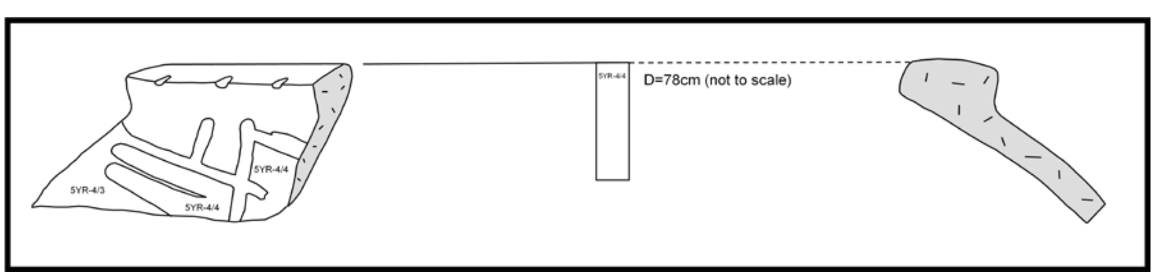
Figure 4.8 – Example Type 6



Type 6 = spout (Figure 4.8)

This spout is easily identifiable as it varies little in terms of its shape and surface treatment. Despite the presence of only one example within both controlled surface collections (n=1 or 1% - see below), this is a fairly common vessel type as several have been recovered throughout the site during informal surveys. The form is that of a narrow spout that comes to a blunt point at the tip, making a narrow hole that is less than 1.5 cm in diameter. The exterior of this type is always highly burnished and there is never any appreciable amount of visible temper. All examples have a short portion of what is presumed to be a thin, rounded handle that is connected to the spout approximately mid-way between the lip and the point at which the spout would have been connected to the body. Based upon other published examples of vessels with rounded handles dating to the Late Formative Period (see Ford 1949; Strong and Evans 1952), it seems likely that this handle was connected to another spout, meaning that this form/type is that of a double-spouted vessel. In addition, the recovery of a complete double spout vessel connected by a thin rounded handle in 2008 further supports the hypothesis that the Type 6 spouts are from a double-spouted vessel. There is no visible temper in the spout. The color of the paste is somewhat unusual when compared to other Jatanca vessels as it is a deep grey. The exterior is almost always fired to a yellowish-orange color. Beyond burnishing and the use of a connecting handle, Type 6 spouts are undecorated.

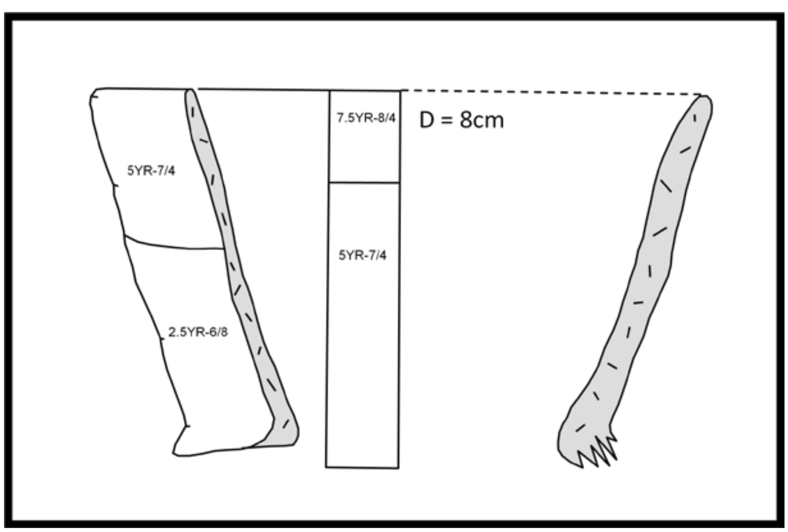
Figure 4.9 – Example Type 7



Type 7 = Bolstered Rim Tinaja (Figure 4.9)

Despite the fact that no examples were recovered from the controlled surface collection, this *tinaja* type can be found throughout Jatanca. As with many of the *tinaja* types found within JE-1023, the rim of this vessel has been reinforced with an additional band of clay that is likely added near the end of the construction process. Typically, this band is decorated with a series of shallow incisions within the exterior edge (Castillo Incised – see Strong and Evans 1953). At times, simple painted geometric decorations are applied with a narrow brush in a rather casual fashion (Figure 4.20). The size of these *tinaja*s can vary but tend to be about 75cm in diameter. The temper used in the construction of this type tends to be larger than that used in the construction of the other 9 types, and varies in size from sand to small pebbles. The exterior of the vessel is generally smooth, but never burnished. The color varies, but many of them were fired to a deep red-purple (ex = 10YR-4/1), while the slip used to decorate the exterior trends toward a cream color (ex = 5YR-4/3 to 5YR-4/4).

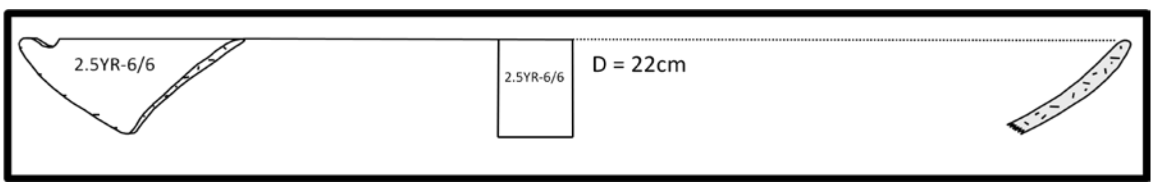
Figure 4.10 – Example Type 8



Type 8 = bottle/Possible Cántaro (Figure 4.10)

Only one example (n=1 or 1%) of this ceramic type was recovered during the controlled surface collection, but more have been found within Jatanca, though not in great numbers. This vessel has a relatively restricted neck that steadily flares out near the lip. Midway between the lip and the point where the rim was attached to the shoulder, there is a slight undulation toward the exterior of the vessel. The interior and exterior of this type can be covered in a thin, pale slip. Generally, the slip covers the area from the lip to the mid-point of the rim and never extends down to the shoulder of the vessel. In all cases, the slip appears to have been rather hastily applied. The temper used in the construction of this bottle is generally fine sand. The exterior color varies, but trends toward an orange to orange-red finish (ex = 2.5YR-6/8). Examples of this type are generally small.

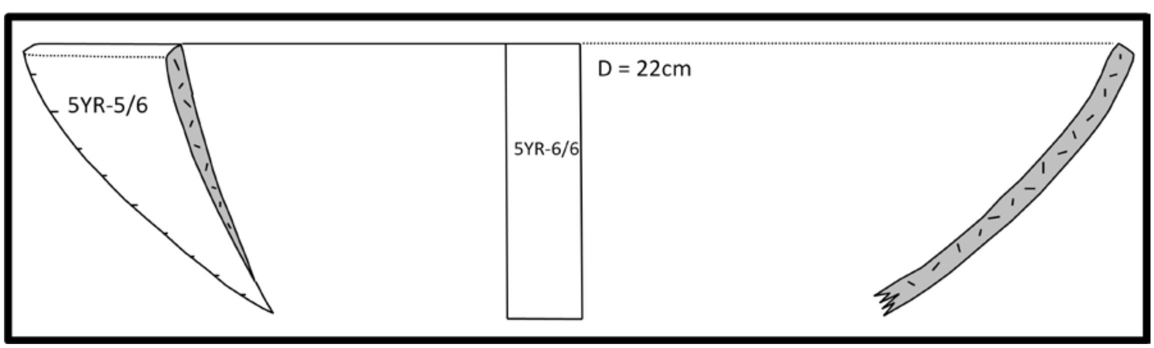
Figure 4.11 – Example Type 9



Type 9 = shallow bowl (Figure 4.11)

This bowl is encountered throughout the site and is one of the few types that were found within all three phases of ceramic collection (see above). With regard to the controlled surface collection, numerous examples (n=15 or 12%) were encountered. This bowl has a simple form consisting of a shallow, rounded interior that terminates in a rounded to slightly tapered, yet still rounded lip. While this bowl is seldom slipped, many examples have been found that have been burnished – primarily within their interior. The modeling and punctuating decoration sometimes found on other bowls (such as type 4), have yet to be found in association with this type. However, numerous examples of type 9 bowls that have been incised can be found throughout JE-1023. The most common form of incising associated with this bowl is simple finger nail impressions on the lip. While the groupings can vary in number, generally, the groups contain three to four shallow fingernail impressions clustered close together. The groups of fingernail markings are spaced relatively equidistant around the lip of the bowl. The complete Type 9 bowl found within excavation Compound I/Unit #4 had four tight groupings of multiple shallow nail impressions spaced relatively equidistant around the rim. In addition, examples of type 9 bowls have been found that have incisions on their exterior (Ancón Fine Line Incised – see Strong and Evans 1953) that form simple geometric patterns. Finally, several examples have clusters of small triangular notches cut out of their rim (see below Figure #4.30; see also Strong and Evans 1952). In general, these bowls are tempered with fine sand and have a diameter of about 20cm. The surface color varies, but tends toward an orange-red with elements of brown mixed throughout (ex = 10R-6/6). Fire clouding is also generally apparent on these vessels, but in general, they are free of any surface soot.

Figure 4.12 – Example Type 10



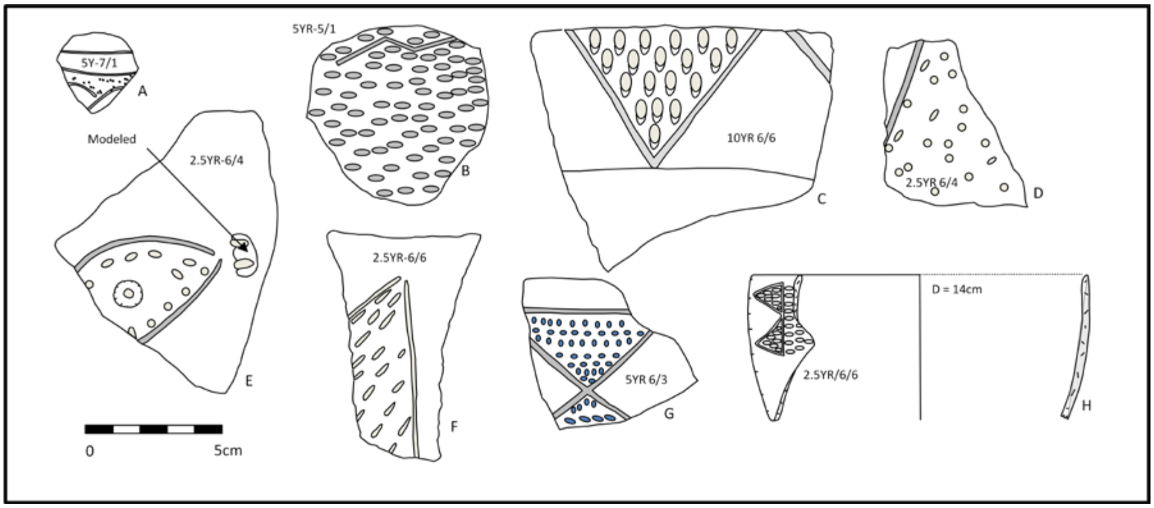
Type 10 =bowl (Figure 4.12)

This bowl type is not particularly common throughout the site, and only one example (n=1 or 1%) was recovered in the surface collection. This bowl tends to be much rounder through the base than the type 9 bowl, and curves in slightly beyond the vertical line near the lip. The lip is unmistakable as it is relatively thick and flattened on top, giving it an almost “square” appearance. It tends to be deeper, rounder and have a larger diameter (approximately 35cm) than the type 9 bowl. Despite its larger size, like the type 9 bowl, the temper used in construction is the same: small grains of sand. This vessel is never decorated and generally has a relatively rough exterior. Indeed, the surface of this vessel often appears to have been smoothed in only the most cursory of manners. Typically, this vessel is fired to an orange-red color (ex = 10R-5/3), not uncommonly with some resultant fire clouding.

Surface Treatment Types

Based upon criteria developed first in the Virú Valley, a number of surface treatment types have also been identified within Jatanca (Collier 1955; Strong and Evans 1952). Surface treatment types are associated with both finewares and domestic wares. Typical design elements often associated with domestic ceramics include punctating, incising, modeling, and slipping. Finewares are generally identified by the presence of reduction painting techniques that create designs with negative-produced images, but sometimes include additional surface treatment techniques such as punctating, incising, and modeling (Bennett 1939; 1950; Collier 1955; Donnan 2009; Strong and Evans 1952). Surface treatment types associated with both domestic and finewares have been found within the architectural core and surrounding domestic area of Je-1023. Below is a brief description of those types and how they compare to their Virú Valley counterparts.

Figure 4.13 - Ancón and Guañape Zoned Punctate



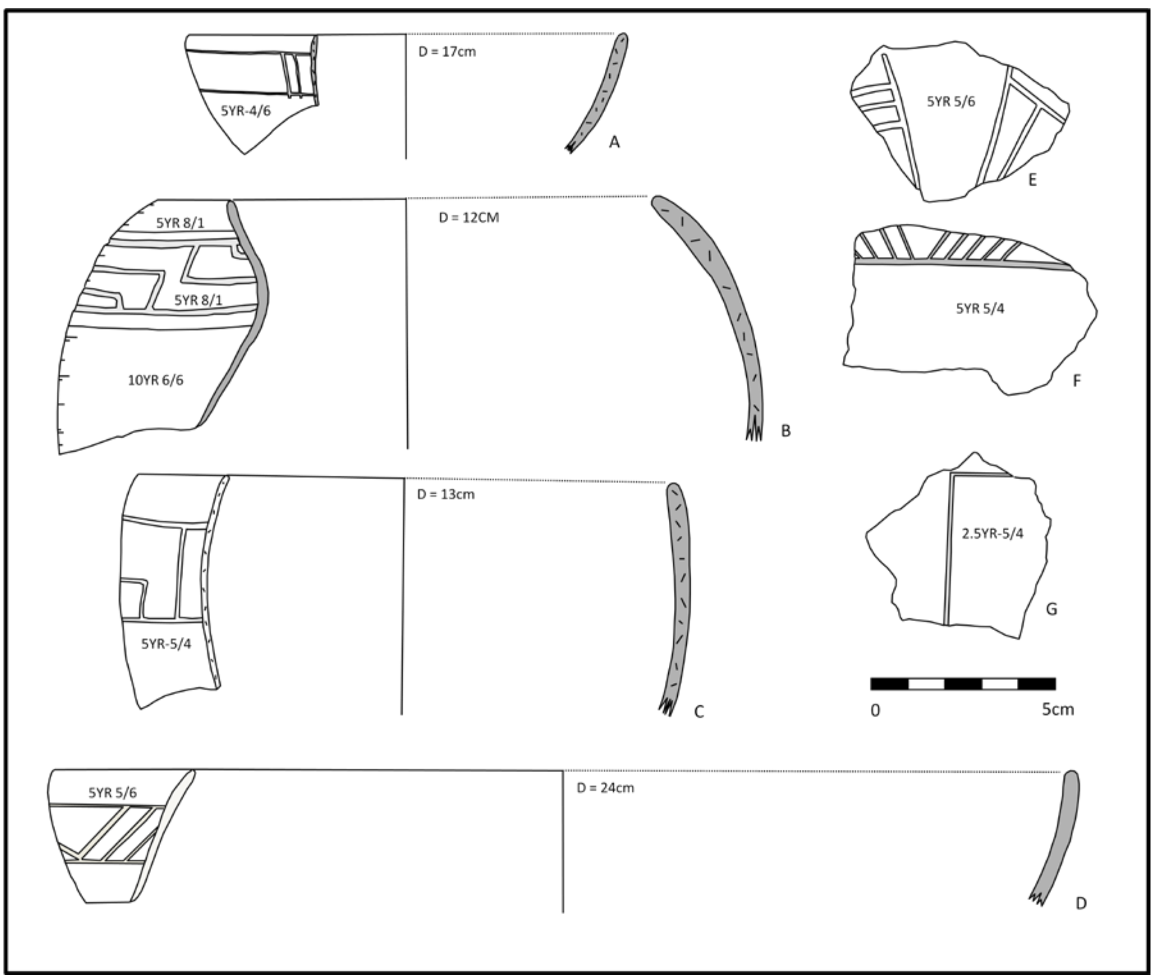
Distinguishing Ancón Zoned Punctate from Guañape Zoned Punctate is difficult and involves subjective interpretation on the part of the archaeologist. Strong and Evans described the Ancón Zoned Punctate and Guañape Zoned Punctate surface treatment as being made up of:

> "…straight or curvilinear lines zoning off punctated areas. The design themselves are essentially the same as those found in Guañape Zoned Punctate. The Ancón Zoned Punctate designs, however, are generally more carefully made, the punctuations more regular and the zoning lines are evenly incised" (1952:291 – illustrations on page 292).

The illustrations in Strong and Evans of Guañape Zoned Punctate (1952:285) and Ancón Zoned Punctate (1952:292) effectively demonstrate the similarity between the two types. In general, though, the punctations within the surface of the Guañape Zoned Punctate are more elongated, as if they were gouged into the surface more than they were carefully impressed. Therefore, weighting the shape of the punctations more than any other factor, sherd A (Figure 4.13) has been tentatively identified as an example of Ancón Zoned Punctate, with the remainder of the above sherds (B-H) falling under the categorization of Guañape Zoned Punctate. However, it must be admitted that the punctations in sherd A are not as evenly or tightly spaced as typical examples from the

Virú Valley, calling the placement of sherd A into this category into question (see Strong and Evans 1952: page 292). Sherds C-H, however, seems to fit well within the Guañape Zoned Punctate category established by Strong and Evans (1952) – especially sherd G and rim sherd H. While sherd B does not appear to be zoned and may be better-described as an example of Guañape Punctate, this could be the result of its fragmentary nature as all other characteristics of Guañape Zoned Punctate (incised line, punctations) are present. While only a few examples of each of these types have been recovered from the site, the presence of this form of surface treatment (most often found on bowls and *tinajas*) is significant in that it provides evidence of an early, pre-Salinar occupation within Jatanca.

Figure 4.14 - Ancón Broad-Line Incised



As with the Ancón Zoned Punctate/Guañape Zoned Punctate, the Ancón Broad-Line Incised type (Strong and Evans 1952 – Illustrations on Page 290) can at times be difficult to differentiate from other incised surface treatment types – in this case the slightly later Gallinazo Broad-Line Incised (Strong and Evans 1952 – Illustrations on page 324) – especially in instances where one is unable to control for relative time via stratigraphic organization and/or sherds that are relatively small or worn. Unfortunately, both conditions exist within Je-1023 where deflated soils have resulted in the direct super-positioning of ceramics that are separated in manufacture and use by as much as a few hundred years, and many of the sherds have become abraded both by daily winds and the passing of barchan dunes.

In addition to having a well-burnished exterior, Strong and Evans describe the Ancón Broad-Line Incised type as having "…geometric and possibly naturalistic designs outlined by broad incised lines" that are either straight or curved (1952). The designs were further subdivided into four subtypes (Strong and Evans 1952:289):

Sub-type I – Mainly employs parallel straight lines

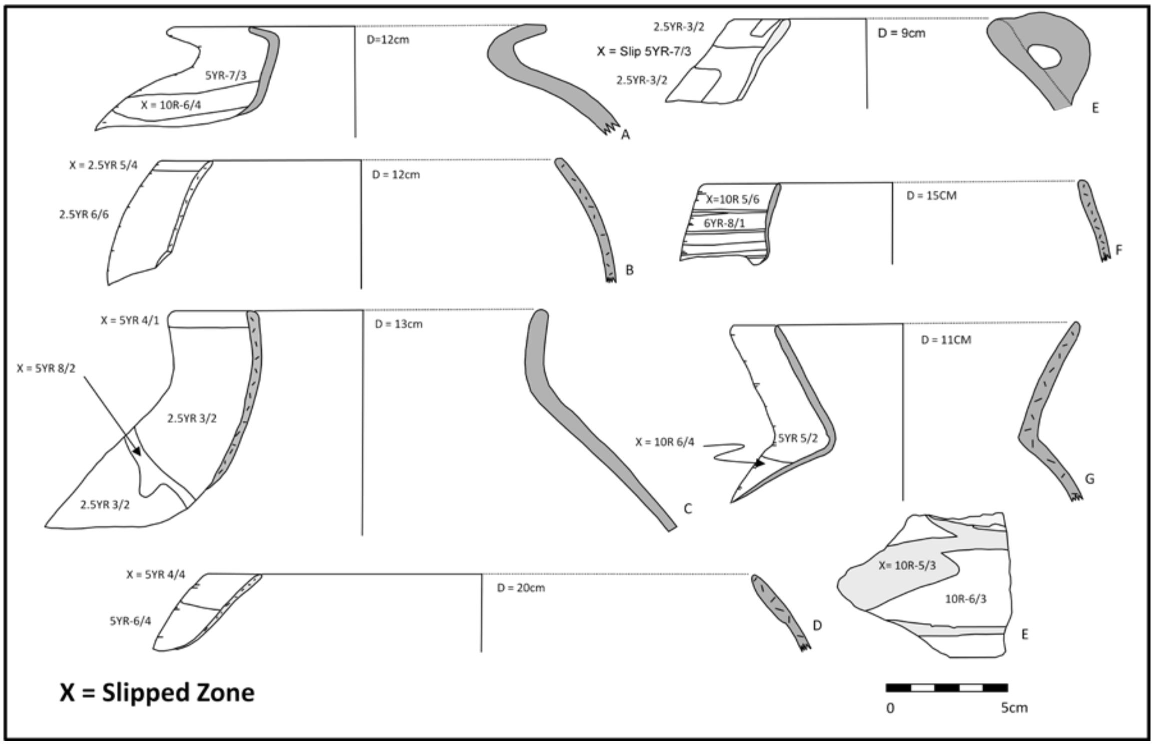
Sub-type II –Zoned designs. Broad lines outline areas of thin designs (parallel, zigzag, etc…)

Sub-type III – Combination of broad-Line incising and modeling

Sub-type IV – Miscellaneous

It would appear that most of the Ancón Broad-Line Incised sherds from Jatanca (Figure 4.14) are best-categorized as Sub-type I – designs that use parallel and/or straight lines (A-G). Due to the fragmentary nature of the collection, identifying sub-type II or Sub-type III is difficult, but there is a possibility that some of the sherds have zoned patterns as well (D-F and perhaps A). Within the Virú Valley, the use of this surface treatment was associated with numerous vessel classes such as *olla*s, bowls, and *cantaro*s. At Jatanca, however, it appears to have been used mainly to decorate the exterior of relatively small bowls with either unrestricted (A and D), or slightly restricted openings (B and C).

Figure 4.15 - Puerto Moorin



The signature of Puerto Moorin ceramics ("Salinar" in the Jequetepeque Valley) is a somewhat hastily-applied white-wash slip on a redware or orangeware surface resulting in a positive geometric design (Strong and Evans 1952 – Illustrations on Page 299). While generally the surface of the vessel was only expediently smoothed resulting in an overall "gritty surface texture," at times the vessel surface was "roughly polished" with a smooth object resulting in a series of short, parallel tracks (Strong and Evans 1952). In some cases, incising or modeling was used in conjunction with the slipped design (Strong and Evans 1952). The design elements, made up of thin bands, dots, triangles and crescents, are used alone or in combination with other elements, and can be divided into five decorative sub-types (Strong and Evans 1952:296-297).

Sub-type I – Continuous band of white-zoned triangles between shoulder and base

Sub-type II – Horizontal or vertical lines often used with shapes

Sub-type III – Parallel lines and dots

Sub-type IV – crescent-shaped units

Sub-type V – Miscellaneous

When comparing the above ceramics in Figure 4.15 to the specific Puerto Moorin sub-types created by Strong and Evans (1952), it is obvious that none of the Jatanca ceramics fit particularly well within Sub-types I-IV. No definite examples of sub-type I, II, III, or IV have been found, which may be related in part to small sherd size and wind abrasion which makes pattern identification difficult. However, when the slip is visible on Puerto Moorin ceramics from Je-1023, design elements take the form of a hastily applied band around either the mouth (B, D, and E) or shoulder (A, C, G, and E) of the vessel. Despite this relatively poor inter-valley "fit," Puerto Moorin ceramics at Je-1023 and those from the Virú Valley are remarkably similar with regard to paste texture and color, overall vessel form, and the production of vessels that have short, parallel striations polished into their surface.

It is of interest to note that within the category of "miscellaneous," Strong and Evans (1952) noted that reminiscent of an earlier technique used during the Guañape period, some Puerto Moorin vessels incorporated a series of parallel incisions between which was applied a white slip as was done in the case of vessel F. Vessel B in Figure 4.15 also incorporated white slip within its geometric pattern, which might indicate that it is actually Puerto Moorin and not Ancón Broad-Line Incised. However, the exterior geometric design would probably be better-associated with the earlier Ancón ceramic style.

The Gallinazo Ceramics

Categorizing the Gallinazo-style ceramics via the surface treatment typology devised by Strong and Evans with any specificity is made difficult as, by the authors' own admission, two of the categories – Castillo Modeled and Castillo Incised are "catchalls" within which most Gallinazo ceramics can be placed. Even a cursory examination of the illustrations of these two types (Strong and Evans 1952 - Castillo Modeled see pages 314-315 and Castillo Incised 321-322) indicates that there are few specific themes that tie this category together beyond the use of modeling or incising as a decorative technique.

For example, all of the Jatanca vessels below in Figure 4.16 and Figure 4.17 would fall within the category of Castillo Modeled due to the presence of low relief elements that have been modeled and applied to the surface of the vessel (compare C below with H on page 315 in Strong and Evans 1952). Elements such as those depicted in rim sherds A and C, and body sherds B and C are especially common within the Je 1023 ceramic sample, yet are not particularly similar in terms of their shape, placement, size, etc….

Figure 4.16 - Castillo Modeled Rim Sherds

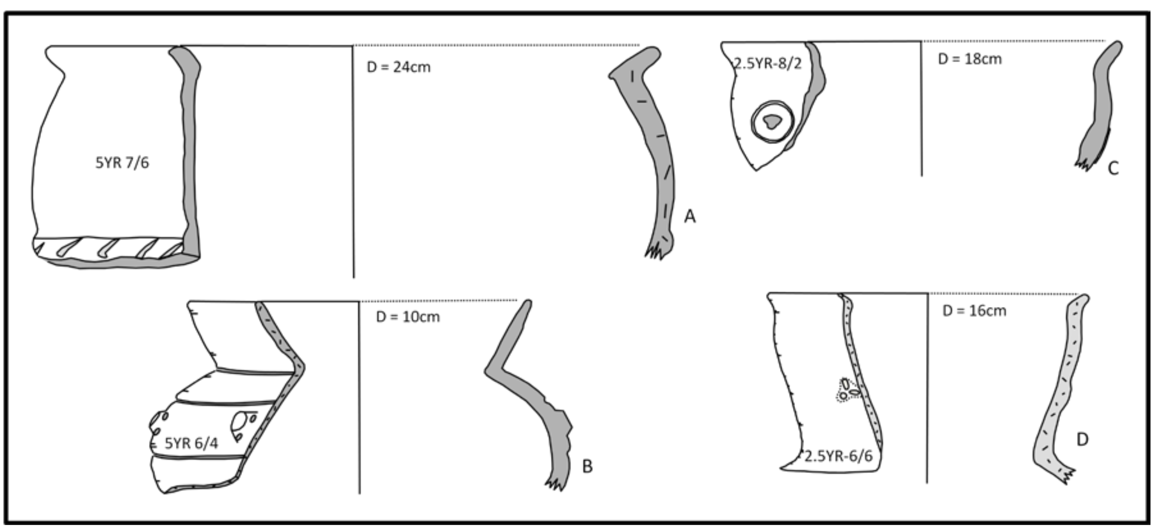
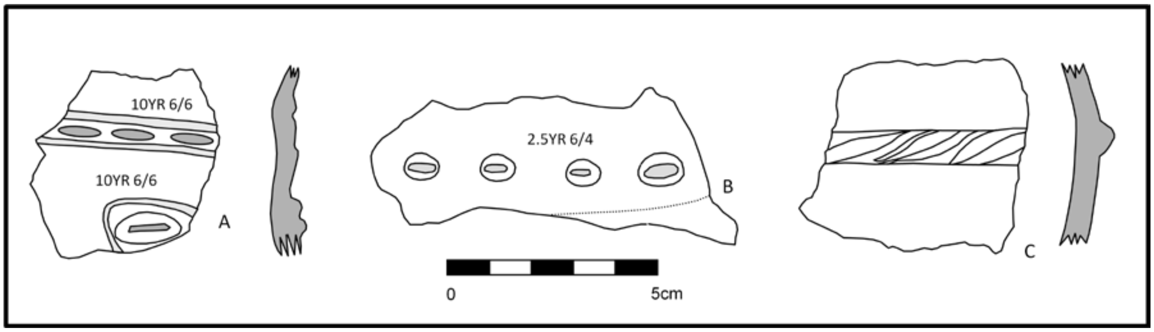
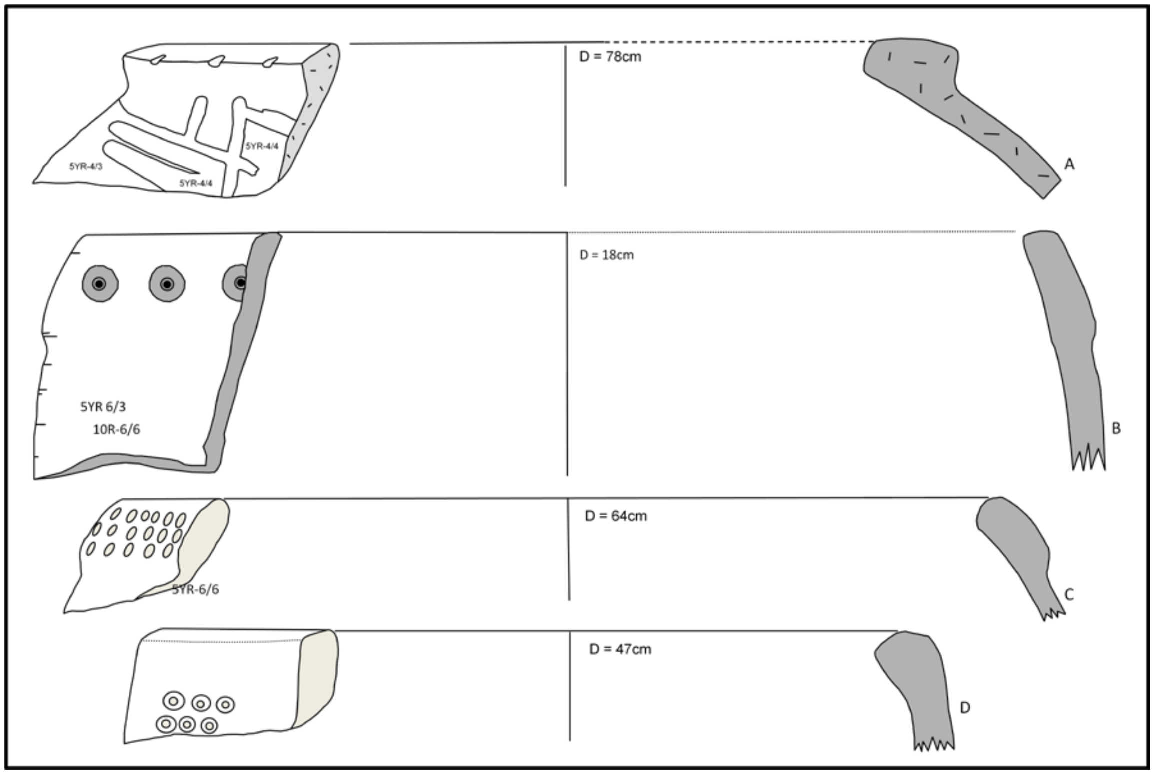


Figure 4.17 – Castillo Modeled Body Sherds



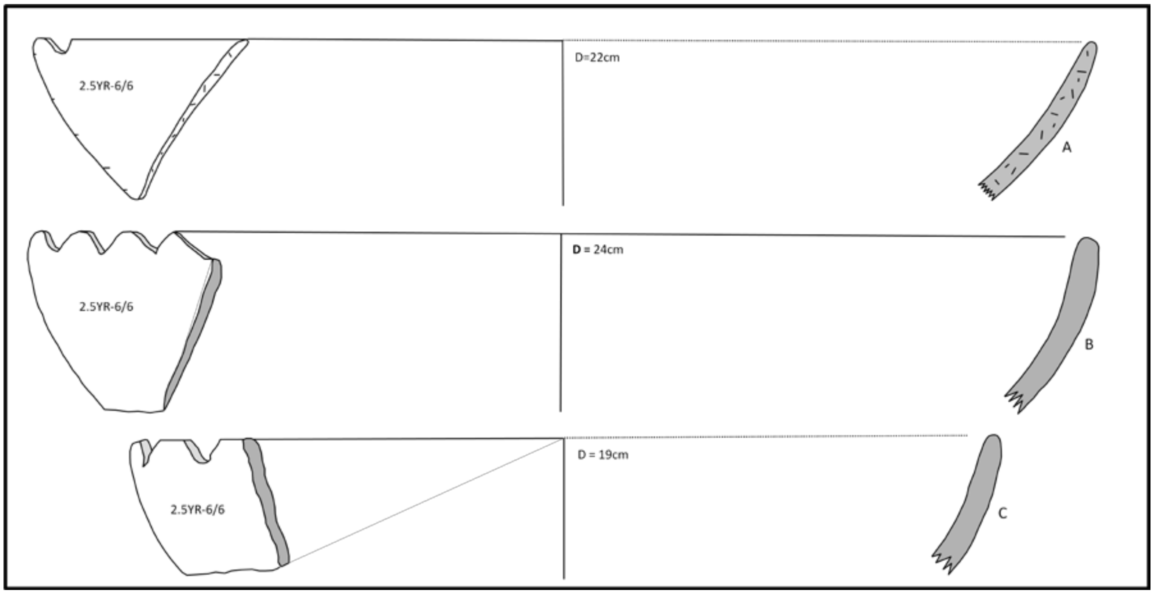
The same criticism can be made with regard to the Castillo Incised category. All of the below Jatanca ceramics in Figure 4.18 would be typed as Castillo Incised (compare C below with F on page 314 of Strong and Evans 1952) based upon Strong and Evans' (1952) broad criteria. What unites this category is the use of some form of sub-surface incision such as cutting, nicking (Rim sherd A), or punctating (Rim sherd B-D) with any one of a variety of tools such as sticks or hollow reeds. As with Castillo Modeled, the location of the decoration within Castillo Incised varies, but tends to be located near the rim.

Figure 4.18 – Castillo Incised Rim Sherds



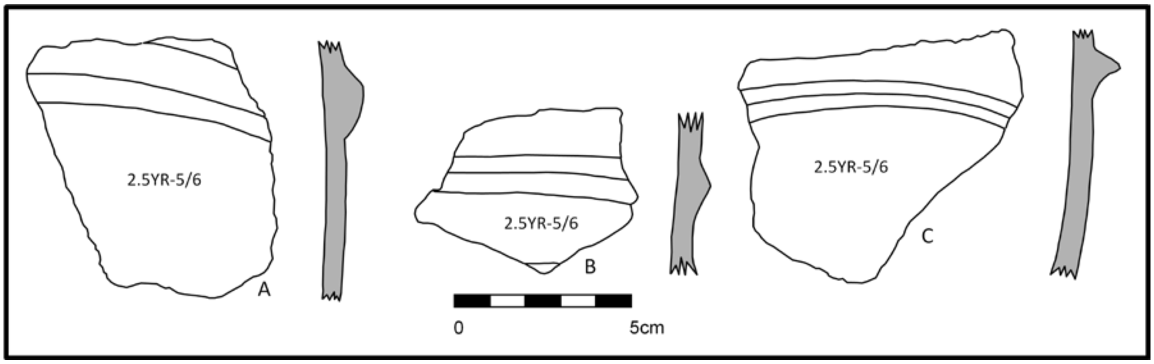
In order to speak with more specificity regarding variation in surface treatment associated with traditionally-identified Gallinazo-style ceramics, a major goal of the Jatanca ceramic analysis was to identify the presence of surface treatment sub-groups within the Jatanca sample. To date, two major sub-groups have been identified: one associated with Castillo Incised, and the other with Castillo Modeled.

Figure 4.19 – Crenellated Rim (Castillo Incised – see Strong and Evans 1952:321-Sherd F)



The Crenellated Rim is a decorative subtype of the broader Castillo Incised type (Strong and Evans (1952: illustration on page 321, sherd F for Virú Valley example). This decoration takes the form of a series of small wedge-shaped cut-outs placed within the rim of the vessel (Figure 4.19). To date, this decoration is associated with only medium-sized, shallow bowls that have an unrestricted mouth. This pattern can take three basic forms: cut-out clusters (A); Continuous, joined cut-outs (B); or evenly spaced, discontinuous cut-outs (C). Additional forms of surface decorations (punctating, incising, slipping, modeling, etc….) have not been found associated with the crenellated rim sub-type.

Figure 4.20 - Rib Ware (Castillo Modeled – see Strong and Evans 1952:314–Sherd H)

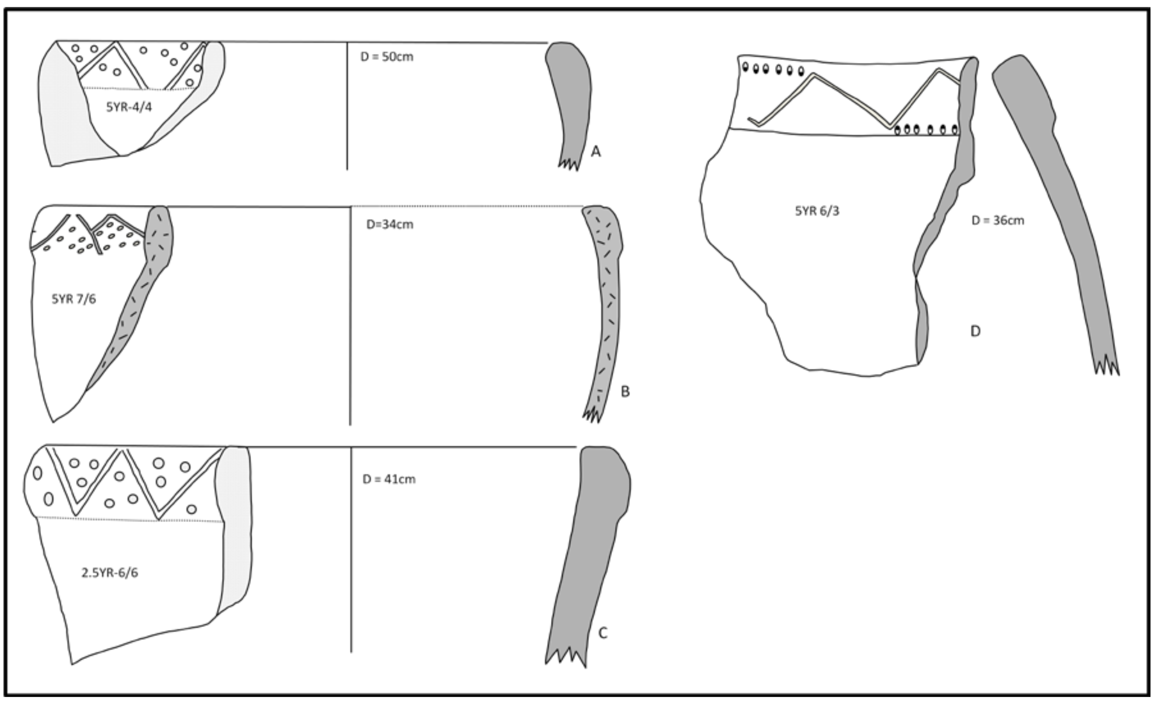


Numerous examples of the sub-type Rib Ware have been found within Je-1023 (Figure 4.20). The rib associated with this sub-type is triangular in cross-section, smoothed, and seamlessly incorporated into the surface of the vessel, but otherwise remains a bit of an enigma as this surface treatment has yet to be found in association with a rim. Therefore, any relationship between Rib Ware fragments and overall vessel form is unknown. Nonetheless, a few broader statements regarding this surface treatment type and vessel form can be made. Based upon the curvature of the vessel, it would appear that the rib is placed near the mid-point between the rim and the base. The paste used in constructing the rib and the ceramic is always the same approximate color (2.5YR-5/6) and consistency (very few, if any, large inclusions). The walls of the vessel are relatively thin and the surface is worked to a polished-to-burnished finish. In terms of color, consistency of paste, and finish, these sherds are very similar to the tapered spouts that are found within Jatanca (see above Form Type 6), which may indicate that the ribs and the spouts are two pieces of the same vessel – a single, or double-spout with handle vessel that has a ribbed body – perhaps similar to that depicted below in Figure 4.38 and 4.39.

Other, more tightly-defined surface treatment types associated with the Gallinazo occupation of the Virú Valley are also found at Jatanca. One of these is Gallinazo Broad-Line Incised (Strong and Evans 1952 - illustrations on page 324), which is recognized by the placement of a zoned-punctated design on the rim of the vessel (Figure 4.21). Strong and Evans describe this type as incorporating broad incised lines used alone or with punctations that form geometric patterns. They further describe the presence of two sub-types:

> Sub-type I – those that use only broad lines in forming the design
> Sub-type II – those that use both broad lines and punctations in forming the design.

Figure 4.21 – Gallinazo Broad-Line Incised (Zoned Punctate)



Clearly, the above examples from Jatanca fall into the latter category, and vessels of this type are commonly found throughout the site. In fact, this type is so common, that it is referred to as "Gallinazo-Style Zoned Punctate" by members of *Proyecto Jatanca* and could probably be considered a legitimate sub-type of Strong and Evans' larger Gallinazo Broad-Line Incised category. This design motif is typically associated with large *tinajas* and medium-to-large bowls that are made of a very sandy, well-mixed paste (see also Strong and Evans 1952). The design is located on the rim of the vessel and was not combined with additional surface treatments such as burnishing, modeling, or slipping.

Figure 4.22 – Negative Resist Rim Sherds

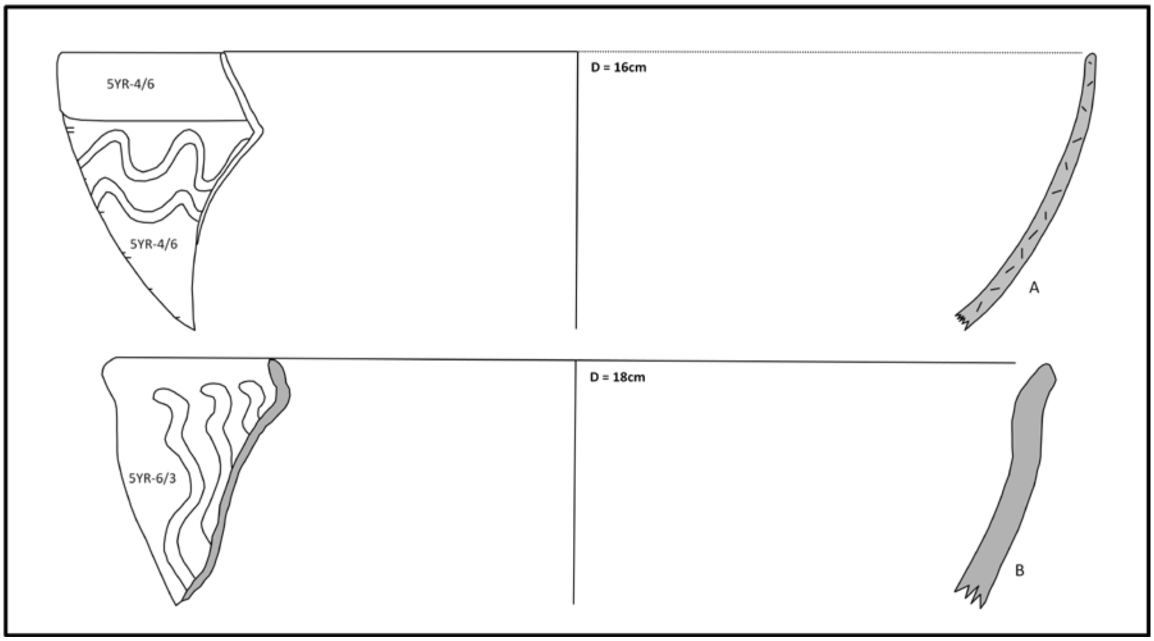
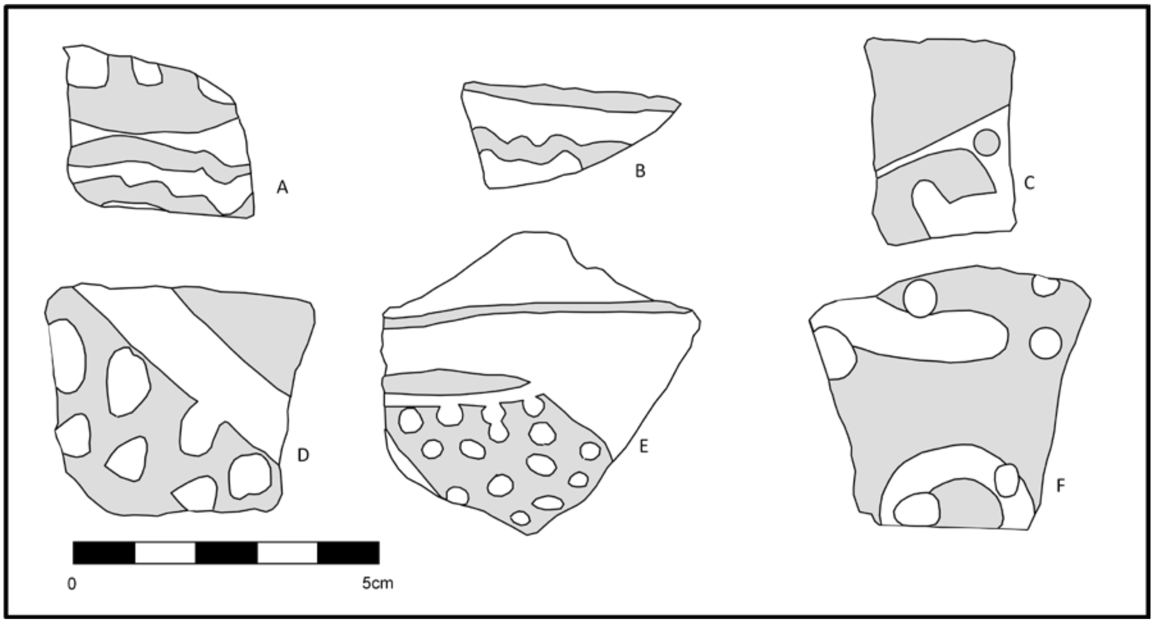


Figure 4.23 – Negative Resist Body Sherds



A final surface treatment type identified in both the Virú Valley and Jatanca is Negative Resist, which is made by employing either paint to create the image, or wax that is applied over an underlying slip. During firing, the wax burns off and creates a negative image via a combination of both the underlying and overlying slip (Figure 4.22 and Figure 4.23). This surface treatment type is especially important as it is regarded by most North Coast archaeologists as the marker of Gallinazo culture *par excellence,* a topic discussed below in detail (Bennett 1950; Collier 1955; Donnan 2009; Larco Hoyle 1946, 1948; Strong and Evans 1952). During the 2004-2005 field season, numerous examples of this type were recovered from surface context both within, and exterior to Jatanca's compounds.

The designs made via negative resist are generally combinations of lines (straight, wavy, and curved) and dots that form simple geometric designs. They were never used to render a naturalistic scene or depict animals or anthropomorphic figures (Strong and Evans 1952). Strong and Evans (1952) note that within the Virú Valley, this form of decoration was often used with other techniques such as modeling (vertical and horizontal ribs; animal head lugs; etc.…), incising, or punctuating, which stands in direct contrast to examples from Jatanca where this mixing of surface treatments has yet to be identified – despite the presence of all of these forms of surface modification in other ceramic types. Also characteristic of the Negative Resist type is that the pattern was applied across "large portions" of the vessel's surface and is generally not restricted to zones. Based upon their collection, Strong and Evans (1952) create thirteen sub-types used to further categorize Virú Valley Negative Resist ceramics (see page 302 for details). Neither of the above bowls (Figure 4.22 A and B) with their wavy, parallel lines and lack of associated dots fit within any of these categories. In fact, Bowl A may be especially unusual in that the lines are present only around the rim of the vessel, giving it a somewhat "zoned" appearance.

The negative painting on the body sherds (Figure 4.23 A-F) – hastily applied wavy and straight lines in association with dots - is far more typical of what is found within the Virú Valley (Strong and Evans 1952: see pages 305-306 for illustrations). However, it appears as though the designs on the Jequetepeque Valley examples are not applied with the same care as those from the Virú Valley. In addition, the most typical negative resist subtype within the Virú Valley – one or more wavy lines placed between one or more pairs of straight lines (Strong and Evans 1952) - was not encountered during the 2004-2005 field season[28]. So while negative resist was used within the Jequetepeque Valley during the Late Formative Period, the designs differed considerably from those produced contemporaneously within the Virú Valley.

Some of the sherds depicted in Figure 4.23 (sherds D-E) might fall under the category of Carmelo Negative, a type that is closely related to Gallinazo Negative Resist Wares and is produced in the same way. The difference between Gallinazo Negative Resist Ware and Carmelo Negative is that the latter designs have incorporated large "white" areas outlined with a thin black line into the overall evenly rendered, generally simple geometric design (Strong and Evans 1952). Most importantly, perhaps, is that additional surface adornments such as punctations, incisions, and modeling are not

[28] A few examples of this Negative Resist subtype have since been found during Proyecto Jatanca's three subsequent field seasons (Swenson, Chiguala, and Warner 2008, 2009, 2010). However, to date, this subtype does not appear to have been particularly popular within Jatanca.

used in conjunction with the Carmelo Negative type (Strong and Evans 1952). Sherd E in Figure 4.23 is very similar to sherd I depicted in Figure 61 of Strong and Evans (1952). Sherd D and F (and possibly C) have large “white” areas that appear to have been purposefully included as part of the overall surface treatment scheme. Therefore, it is entirely possible that some of the negative resist sherds found within Je-1023 could be categorized as Carmel Negative.

Other Ceramic Artifacts

Two additional kinds of ceramic artifacts typically encountered within Jatanca need to be discussed: spoons (Figure 4.24) that could have been used for eating or serving, and *ralladores,* which were used to process vegetal matter (Figure 4.25). Both of these ceramic forms provide information related to quotidian life within Je-1023. Unfortunately, spoon fragments cannot be assigned a specific form-type as they generally do not include enough of the rim. In addition, it must be noted that it is possible that some ceramics that have been identified as shallow bowl fragments, may in fact be spoon basins. *Ralladores* cannot be assigned surface treatment types as there is far too much variation within the sample, although many could be grouped within a broad category such a “fern pattern” (see Swenson 2004 for tentative typology).

Figure 4.24 – Spoons/Spoon Handles from Jatanca

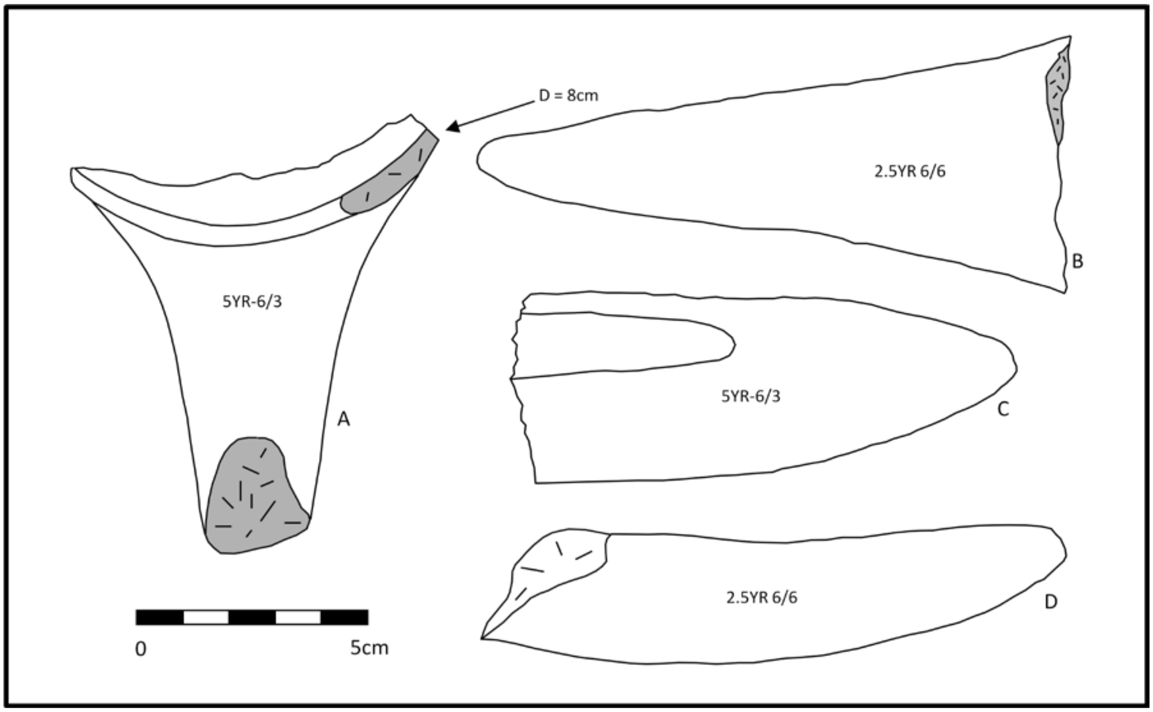
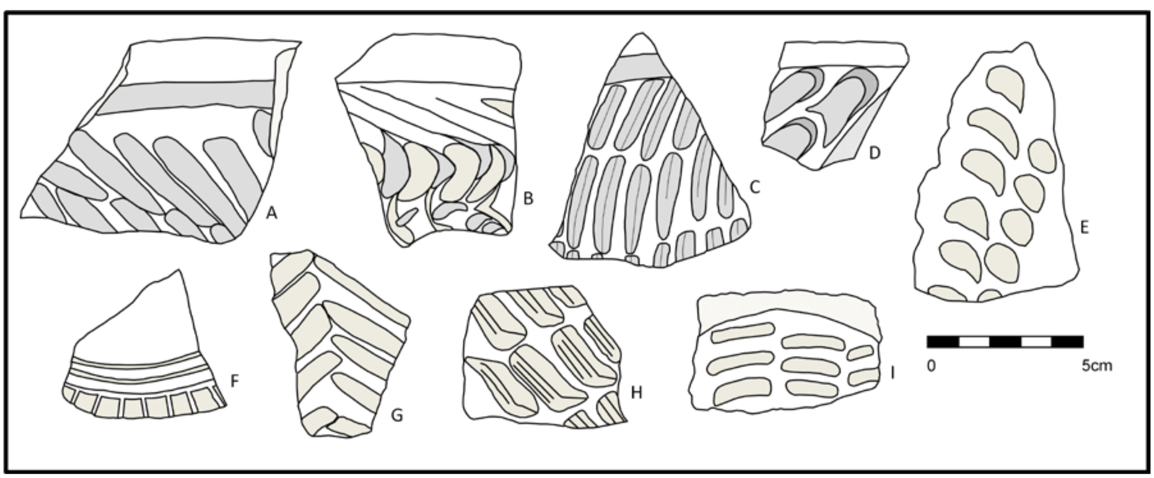


Figure 4.25 – Ralladores from Jatanca



The spoon fragments found within Jatanca are usually represented by only the broken handle with perhaps a bit of the rim (Figure 4.24). Indeed, fragment A from the above illustration is very much the exception as a sizeable portion of the spoon basin still adheres to the handle. The material used to make these tools is generally similar to that used in constructing Gallinazo-Style Zoned Punctate vessels – a paste within which copious amounts of sand has been thoroughly mixed. In general, spoons are not decorated, but spoon C may have had a bit of slip on its surface. It is also possible that some of the handles are not from spoons, but are from "corn poppers" instead (especially D). However, corn popper sherds have yet to be identified within Jatanca.

Ralladores were generally rounded, high-walled vessels that had deep gouges roughly impressed into the interior surface while the vessel was still quite wet (Figure 4.25). These gouges were patterned in a variety of ways, one of which has been tentatively identified as the "Fern Pattern" (sherds A, C, and G; see also Swenson 2004). The mouth of a *rallador* is generally open although in a few cases it is slightly restricted, giving the vessel a "pumpkin-like shape" (Swenson 2004).

Ralladores were used to process agricultural foodstuffs in preparation for cooking and consumption. The relatively high frequency of this functional type within Jatanca might indicate that those living in and around the architectural core spent a considerable amount of time processing agricultural foodstuffs. In 2006, five *ralladores* found during the surface collection were given to José Iriarte of Exeter University for phytolyth analysis in an effort to determine what kinds of foodstuffs were being processed. Unfortunately, no phytolyth residue was discovered during the course of analysis, likely due to the unprotected provenience of the sherds (Iriarte Personal Communication 2007). Nonetheless, ethnobotanical data gathered from floor context during excavation indirectly indicates that the *ralladores* were used to process a number of agricultural foodstuffs – especially maize – and therefore played an important role in the subsistence economy of Jatanca (see Chapter 5).

Summary of Surface Treatment Types found at Je-1023

Numerous surface treatment types that were first defined within the Virú Valley by members of VCIAR (Bennett 1939, 1950; Collier 1955; Ford and Willey 1949; Strong and Evans 1952) have also been identified within the confines of Jatanca's architectural core. This widespread distribution, especially with regard to the domestic ceramics, might indicate the presence of significant inter-valley communication that resulted in a shared, pan-North Coast surface treatment aesthetic during the Formative Period.

Yet within this general canon of Formative Period surface treatments, some regional variation existed as well. At Jatanca, negative resist wares are not adorned with additional forms of surface treatment such as modeling, incising, or punctating. It is possible to partially explain this lack of additional surface adornment on the presence of the closely related Carmelo Negative type. However, it still remains that no example of negative resist ware has been found that incorporates additional adornment. Furthermore, the hastily-applied designs created via negative resist techniques at Je-1023 differed from those created within the Virú Valley, where lines and geometric elements were placed with evidently much greater care. The same can be said for the Puerto Moorin material as well: while the design technique is the same in both valleys, the resulting designs are markedly different. The Puerto Moorin designs associated with Jatanca were again made with apparently less care than those in the Virú Valley, where obvious geometric shapes were commonly applied to ceramic surfaces. In addition, lugs modeled into animal or anthropomorphized heads were far more popular within the Virú Valley, and are rarely encountered within Jatanca. Finally, some surface treatment types found within the Virú Valley, such as Ancón Brushed and Ancón Engraved (Strong and Evans 1952 – illustrated on page 293) are not found within Je-1023. A possible explanation for this is discussed below.

Systematic Surface Collection, Opportunistic Surface Collection, and Excavation

Three major methods were used to compile the collection of Jatanca ceramics: systematic surface collections; opportunistic surface collection; and excavation. All three methods had their relative strengths and weakness. For example, the systematically acquired collection should, if of sufficient size, lend itself to meaningful statistical analysis and/or a means of identifying patterns of ceramic distribution across the landscape. Opportunistically collected ceramics could be used to increase the size of the overall collection and better-understand the range of variation within types – both rim form and surface treatment. Finally, ceramics acquired in excavation could be used to examine the relationship between architecture and the surface ceramics. These three methods and their results are examined below.

Method of Collection: Systematic Surface Collections

Due to time constraints, this project was able to make only two controlled surface collections within the architectural core of Jatanca via the implementation of a gridded collection system: within the plaza of the acropolis (Surface Collection 1, or SC-1), and within a domestic zone between the southwestern edge of the Acropolis and Compound V (Surface Collection 2, or SC-2). The rationale behind selecting these two zones for collection combined a desire to mitigate (at least partially) the impact upon the provenience of ceramics due to the barchan dunes in the area, and to sample areas that appeared to have dense collections of identifiable domestic material. For example, it was hoped that Surface Collection 1, made within the relatively sheltered north plaza of the Acropolis (see Chapter 6 for Plan), would result in the acquisition of ceramics that were relatively undisturbed by natural forces such as barchan dunes, ENSO events and associated erosion, and prevailing northerly winds. Surface Collection 2, on the other hand, was made along the southwest edge of the Acropolis within what appears to have been a densely occupied domestic zone. In addition, by collecting and analyzing these two functionally diverse areas, it was hoped that significant functional and stylistic differences in the ceramics used within these two zones could be identified (see below).

The same general collection strategy was used within both zones. SC-1 consisted of four rows of five units each that were laid out in a north-south direction within the plaza of the Acropolis. Ten meters separated each row, and ten meters separated each unit, resulting in a collection grid that was 1530 square meters. Each collection unit was 1 meter by 3 meters in size. Therefore, a total of 60 square meters of the Acropolis plaza was sampled, or roughly 3 percent of the total plaza area (2015 square meters). 16 of the collection units contained diagnostic material, yielding a total of 58 useable rims for this portion of the study[29]. SC-2 consisted of three rows of ten units each that were laid out in a north-south direction to the southwest of the Acropolis and to the east of Compound V. Each row was separated by twenty meters, and ten meters separated each unit, resulting in a grid that covered 4300 square meters. Each unit was 1 meter by 3 meters in size. Therefore, a total of 90 square meters was sampled, or roughly 4 percent of the total collection grid. 26 of the collection units contained diagnostic material, yielding 65 useable rims for this portion of the study. Therefore, the total sample size of rim sherds from both collection areas was 123. All ceramics were double-tagged in the field and brought back to the laboratory facility in Pacasmayo for washing, numbering, drawing, and the collection of attribute data.

Discussion of Results

Unfortunately, due primarily to time constraints, the resulting surface collection was not large enough to undergo much in the way of meaningful mathematical manipulation beyond fundamental calculations such as determining the range, mean, median, and mode for selected attributes. Despite the limitations of the sample size, a few basic patterns and physical parameters were identified among the above-defined attributes:

Vessel Form – Vessel form could be determined within reason for 116 of the 123 sherds recovered during surface collection. The most common ceramic form encountered was the *olla* (n=53 or 43%). Bowls were the second most commonly encountered ceramic form (n=35 or 29%). All other ceramic forms such as *tinaja*s (n=11 or 8.9%), *cantaro*s (n=9 or 7%), spouts, (n=2 or 2%), and bottles (n=1 or 1%) made up a much smaller percentage of the overall assemblage.

Rim Diameter – The range, mean, and mode of the rim diameter was determined for each vessel class as displayed in Table 4.4:

[29] Only rim sherds were collected for this portion of the study.

Table 4.4 – Frequency Data for Rim Diameter by Vessel Class

	Number	Range	Mean	Mode
Bottle	1	NA	8cm	8cm (1 example)
Bowl	35	14cm – 52cm	25cm	20cm (6 examples)
Cantaro	9	6cm – 22cm	15cm	19cm and 22cm (2 examples each)
Olla	53	12cm – 39cm	25cm	26cm (5 examples)
Spout	2	.07 – 1.5cm	1.1cm	.07cm and 1.5cm (1 example each
Tinaja	11	23cm – 48cm	35cm	34cm and 41cm (2 examples each)

Vessel rim diameter range was greatest among the bowls and narrowest among the spouts. Average vessel rim diameter varied among the classes from 1.1cm (spouts) up to 35cms (*tinaja*s). That the *tinaja*s had the largest average vessel rim diameter is perhaps little surprise given their use as storage containers that could provide easy interior access.

Vessel (lip) Thickness – The range, mean, and mode of the lip thickness was determined for each vessel class as displayed in Table 4.5:

Table 4.5 – Frequency Data for Lip Thickness by Vessel Class

	Number	Range	Mean	Mode
Bottle	1	NA	0.4cm	0.4cm (1 example)
Bowl	35	0.3cm – 1.4cm	0.7cm	0.8cm (9 examples)
Cantaro	9	0.4cm - 0.6cm	0.5cm	0.5 and 0.6cm (4 examples each)
Olla	53	0.3cm – 1.2cm	0.7cm	0.5cm (17 examples)
Spout	2	0.2cm - 0.4cm	0.3cm	0.2cm and 0.4cm (2 examples each)
Tinaja	11	0.6cm – 2cm	1cm	1cm (3 examples)

Vessel lip thickness range was greatest among the *tinaja*s and narrowest among the spouts. The average vessel lip thickness varied among the classes from .3cm (spouts) to 1cm (*tinaja*s). With regard to the *tinaja*s, it is of interest to note that the general thickness of their walls may reflect their use as a storage container that held relatively heavy foodstuffs and/or liquids such as water or *chicha*. The use of thick walls in constructing *tinaja*s may also be a reflection of their size, as this class of vessel is clearly among the largest of those found within Jatanca (see Table 4.4). *Tinaja*s also demonstrate the broadest range of vessel thickness by class – a fact that may be tied to both their variation in size, and the presence of sub-class functional specialization among the *tinaja*s. This hypothesis, however, remains to be tested.

External Surface Treatment – In general, the sherds that compose the sample exhibit little in the way of surface treatment. However, this may be due in part to their relatively small size. Indeed, many of the more complete vessel fragments found throughout the site, but outside of the controlled collection exhibit, at times, extensive surface treatment beyond just simple smoothing (see below). Nonetheless, there were some examples of surface treatment such as slipping and burnishing (see above for description) within the two collections. Slipping (n=15 or 12%) is almost always composed of a very thin "white" application of clay that appears to have been literally splashed on the vessel. Burnishing also occurs (n=12 or 10%), but with slightly less frequency. Otherwise, the collection contains no other form of surface treatment such as paddle stamping, punctating, incising, net impressing, etc..., despite the obvious presence of some of these treatments within the broader site-wide assemblage.

Internal Surface Treatment – There is little in the way of internal surface treatment beyond simple slipping (n=11 or 9%) and burnishing (n=11 or 9%) within either sample. No examples of post-firing painting were encountered. Also, it needs to be stated that despite the presence of numerous *ralladores* (grater bowls – see below Figure 4.36) within the immediate area of the urban core of the site, none were encountered within the collection units.

Exterior Color – Exterior colors tended toward the "reds" as defined by the Munsell color chart. The majority of the colors had a prefix of 2.5yr (n= 62). 2.5yr-6/6 was the mode color (n=26) and the second most common color was 2.5yr-5/4. Beyond these two specific color categories, ceramics from Jatanca also tend to cluster within the "reddish" to "reddish-brown" portion of the spectrum, with numerous colors occurring only one time. Only a few examples that are yellowish-brown to dark-brown were recorded, while no reduced blackware, kaolin, or negative resist ceramics were found within the systematic collection.

Temper – The vast majority of the sherds within the collection were scored as a "1" (n=75 or 61%), followed by 2 (n=23 or 19%), and 0 (n=20 or 16%). None of the sherds within the systematic Jatanca collection were scored as a "3."

Discussion of Frequency Data Results

In general, the ceramic attribute frequency data confirm the initial, general impressions of the surface material that characterizes Jatanca. The majority of the surface ceramic debris consists of domestic material – especially *olla*s and bowls – that were “reddish” in appearance after firing. Post-firing painting is exceedingly rare and most ceramics have largely unadorned surfaces. Most vessels have moderate amounts of temper

When comparing the above statistical breakdown of the Jatanca sherd attributes to those recovered from the Virú Valley by the VCIAR Project, quite a bit of similarity between the two collections is obvious. Both collections are made up primarily of simple domestic vessels. In fact, relatively small, simply adorned *olla*s make up the vast majority of the two collections, followed by bowls, *cantaro*s, and *tinaja*s (see Ford and Willey 1949, Strong and Evans 1955). That *olla*s were typically used for cooking is substantiated by the heavy soot associated with many of the sherds within the sample. No mortuary ceramics (Bennett 1939; Larco-Hoyle 1943) were recovered from either of the controlled surface collections, a pattern typically replicated within the Virú Valley surface collections as well (Collier 1955; Ford and Willey 1949). One notable difference between the two valleys is vessel form. In some cases, forms common to Jatanca appear to have not been used extensively within the Virú Valley, while at times, the opposite is true – i.e. forms commonly used within the Virú Valley are not found within Jatanca (see below).

When the above categories were cross-tabbed, it was discovered that interior and exterior burnishing generally occurs on smaller vessels (as measured by rim diameter), while slip was applied to vessels of all sizes. Bowls were the most likely vessel form to be burnished (7 of 23 total examples), and *olla*s were the most likely to be slipped (8 of 43 examples). Exterior burnishing also tended to occur when the temper was 0 (9 out of 12 cases), and in no case was the exterior of a vessel slipped if it was made from 0 temper clay. Burnishing tended to occur on vessels with thinner rims (0.8cm and less). Of the 11 instances of interior burnishing, 8 examples were found on vessels that were 0.5cm in thickness. 6 of the 15 type 9 bowls were either burnished (n=3), or slipped (n=3), but never both.

Perhaps the most interesting revelation of the surface collection was the recognition of a possible difference in the composition of the two controlled surface collections with regard to the presence of slipping. The use of vessels that had been slipped (exterior or interior) may have been somewhat zone-sensitive, as a total of 16 vessels within SC-2 were slipped on their exterior, interior, or both, but only two vessels from SC-1 were slipped, both of which were *olla*s that had been slipped both on their exterior and interior. This might imply that slipped vessels were more likely to have been used for vernacular activities within domestic zones than for activities conducted within the plaza – an area that was likely used extensively for ritual purposes (see Chapters 6, 7, 8, and 9). However, given the small size of the two controlled surface collections, a correlation such as this must be tested with a larger sample in order to demonstrate its validity[30].

To sum, the controlled surface collection allowed this project to:

1. Compile basic frequency data related to categories such as type form percentage, rim diameter averages, correlation between surface treatments such as burnishing and vessel form, etc…. This information can be used for future comparative exercises both within Jatanca and for other Middle-Late Formative Period sites.
2. Preliminarily data suggest that slipped vessels were more likely to be used within domestic context than within areas such as the large open plazas which were likely associated with ritual activities (see Chapters 6, 7, 8, and 9).

Method of Collection: Opportunistically Collected Ceramics

In addition to the above systematic collection method, surface ceramics were also collected using a non-systematic or "opportunistic" method, which was every bit as simple as it sounds: when a unusual ceramic was found on the surface during the course of the workday (i.e. mapping, survey, excavation, etc….) it was provenienced, collected, recorded, and drawn – resulting in a collection of 423 rim sherds. Unlike the systematic

[30] A major component of the upcoming 2010 field season at Jatanca is to make a large-scale surface collection throughout the site that will address specific questions such as this, along with providing a more robust ceramic data base that can be statistically manipulated.

collection, this collection purposefully chose ceramics that were more complete, well-preserved and could supply maximal information related to topics such as surface treatment and form. Therefore, the systematic and non-systematic collections formed two parts of a whole – the systematic collection provided limited information on quantitative-based areas of inquiry such as type percentages, and the non-systematic collection provided enhanced data related to vessel type, surface treatments and rim forms. By combining the two data sets, it became possible to examine small rim sherd fragments and sometimes extrapolate as to how the surface treatment may have looked from just a small remnant.

Discussion of Results

Without the opportunistically collected ceramics, a Jatanca-specific rim form or surface treatment typology would not have been possible, nor would the detailed inter-valley comparisons with the Virú Valley. Indeed, most of the sherds collected using systematic methods and excavation were of far too small a size to be of much value in identifying form class, rim form, and/or surface treatment. As forms were identified, additional, larger examples were collected so as to better understand the range of variation associated with the rim diameter, construction materials, construction process, and surface treatment of each suspected type. Therefore in many respects, at least initially, form identification was the result of pattern recognition and intuition. The "reality" of these suspected classes and specific types was then tested against additional ceramics acquired systematically, non-systematically, through excavation, and through a search of the limited literature on North Coast Formative Period ceramics (see Bennett 1939; Collier 1955; Donnan 1976, 1992; Donnan and Mackey 1978; Ford and Willey 1949; Larco-Hoyle 1943, 1948; Strong and Evans 1952).

To sum, ceramics collected non-systematically enabled this project to:

1. Enhance data related to the form, function, and surface treatment of Jatanca's ceramics
2. Amplify comparative analysis between ceramic collections from the *Virú* Valley and Jatanca

3. Test the viability of suspected form types
4. Aid greatly in establishing an approximate range of ceramic variation
5. Provide samples suitable for drawing and photographing

Method of Collection: Ceramics Acquired During Excavation

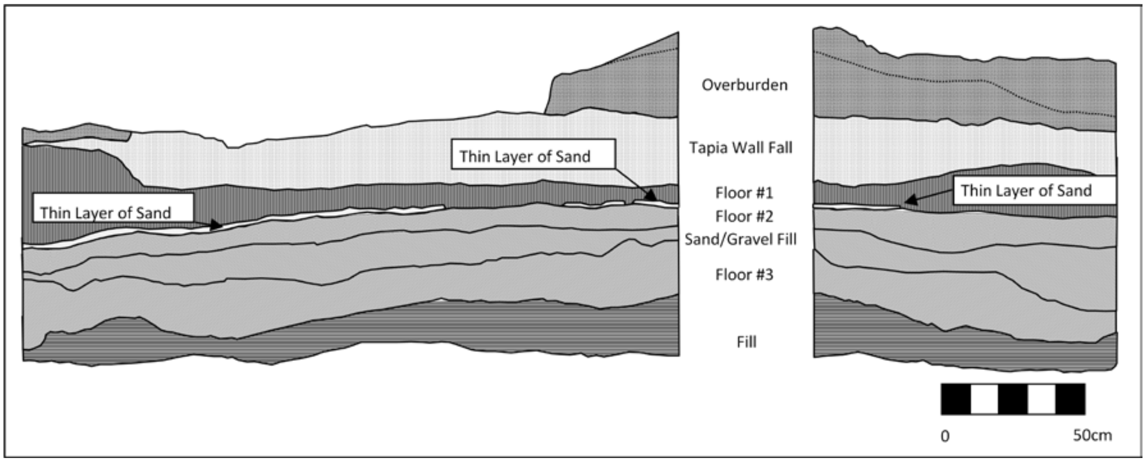
Very few diagnostic rim sherds (n-21) were acquired during excavation (see also Chapter 5), as floors within Jatanca were apparently kept meticulously clean by the compound inhabitants and/or those participating in non-domestic activities within the formal structures (see Chapter 6; see also Attarian 2009). Only one whole vessel and a handful of relatively small sherds were encountered in any kind of meaningful context (i.e. on top of floors, within floors, or between floors). All other excavation ceramics were either located on the surface or mixed within the relatively pure, windblown and dune deposited sand. Nonetheless, a few units contained identifiable rim sherds within stratigraphic context. It must be emphasized, however, that no deep midden deposits of ceramics such as those encountered within the Virú Valley (see Collier 1955; Willey 1953) were encountered during the 2004-2005 field season. This lack of deep middens may be the result of the local taphonomy (see Chapter 2 and Chapter 3), and/or may indicate that Jatanca was occupied for a relatively brief period of time (see also Attarian 2009). Therefore, not only are the total number of sherds relatively low when compared to the Virú Valley results (Collier 1955; Ford 1949; Strong and Evans 1952), it is not currently possible to speak to the issue of site-specific ceramic change over time.

Only one unit contained a whole vessel. **Compound I/Unit #4** contained a small bowl (Figure 4.26) resting on the surface of Floor #1. This vessel represents a typical example of the most common bowl type found within Jatanca. Indeed, three additional examples of this type (Type #9 – see below) were found in the fill during excavation (see chapter 5). This bowl is 21 cm in diameter, has a relatively flat bottom and gently sloping sides that terminate in a bluntly rounded lip that has been impressed with what appear to be groupings of thumb, or fingernail prints.

Figure 4.26 – Photos of Bowl from Excavation Context

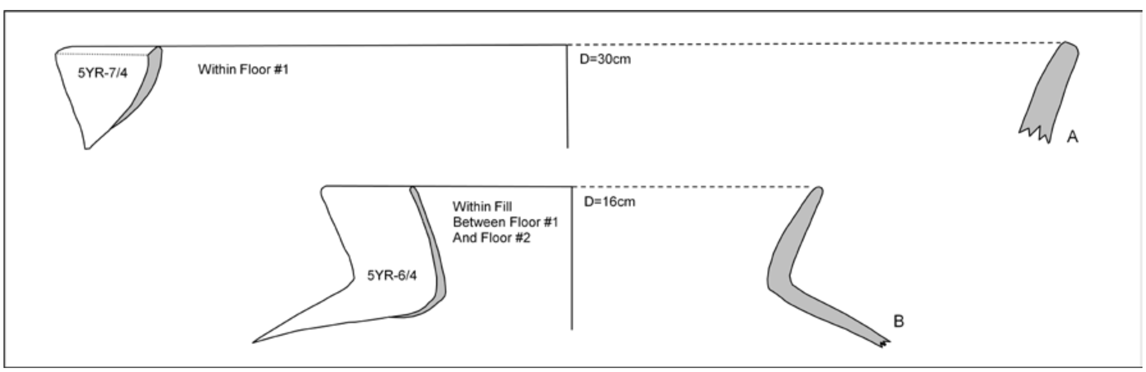
In addition to the above whole vessel, some units contained small bits of diagnostic ceramics within Late Formative Period floors (see also Chapter 5). For example, cleaning activity within **Looter Pit #1** on the Acropolis revealed the presence of numerous layers of superimposed floors and fill (Figure 4.27). The upper-most levels of this unit were composed of wall fall and melt associated with adjacent tapia walls. Beneath this overburden were three well-preserved floors separated by layers of fill. While the fill layer separating Floor #1 and Floor #2 was relatively thin and composed of sand, the layer of fill between Floor#2 and Floor #3 was considerably thicker and made up of gravel/sand mix. The entire sequence rests upon a deep layer of fill made up of pure sand.

Figure 4.27 – Profile of Excavation LP-1



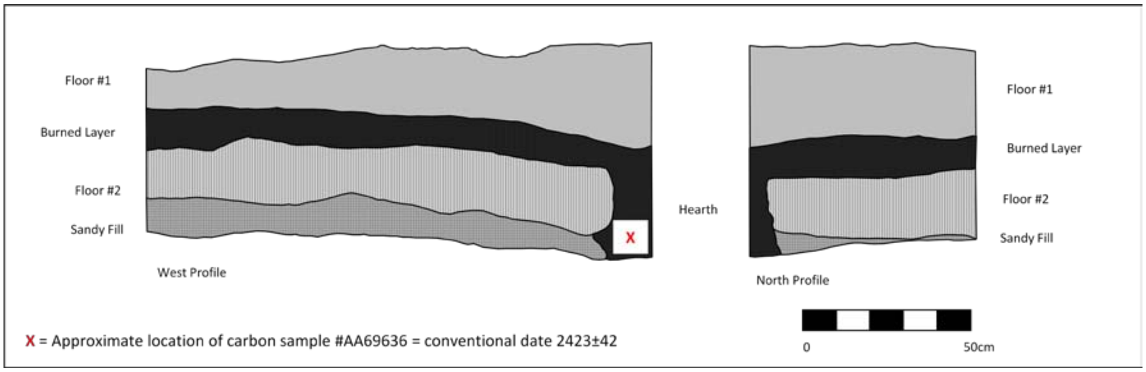
The above unit had two small sherds embedded within the profile (Figure 4.28). Within the center of Floor #1, a small *olla* fragment was found (A). In addition, a small *olla* sherd (B) was also found within the fill between Floor #1 and Floor #2. Both of these sherds appear to be similar to the domestic material that covers the surface of Je-1023's architectural core.

Figure 4.28 – LP-1 - Ceramics



Diagnostic ceramics were also recovered during the cleaning and profile cutting of another looter's pit also located on the summit of the Acropolis. LP-3 (Figure 4.29) revealed the presence of a number of features including floors, a level of loose fill that was composed of sand and burned material, and a possible hearth. Three of these features, the two superimposed floors and the possible hearth, contained small pieces of diagnostic rim sherds.

Figure 4.29 – Profile of Excavation LP-3



From the surface of Floor # 1, two ceramics (Figure 4.30) 0 – a medium-sized bowl (A) and an *olla* (B) were recovered. The interior of the hearth contained six small *olla* fragments interspersed throughout the ashy matrix (Figure 4.32), all of which had a flaring mouth. While cutting back the west wall, a single rim sherd of a likely bowl (Figure 4.32 – sherd A) was found resting on the surface of Floor #2, while the interior of the same floor also contained a number of additional sherds (Figure 4.32): two *olla*s (C and D) and a small, well-polished bottle fragment (B). As with the sherds from LP-1, the sherds recovered from this unit were domestic in nature and similar in every respect (i.e. paste, color, form, etc…) to those found throughout the surface of Je-1023.

Figure 4.30 – Ceramics from LP-3 - Surface of Floor #1

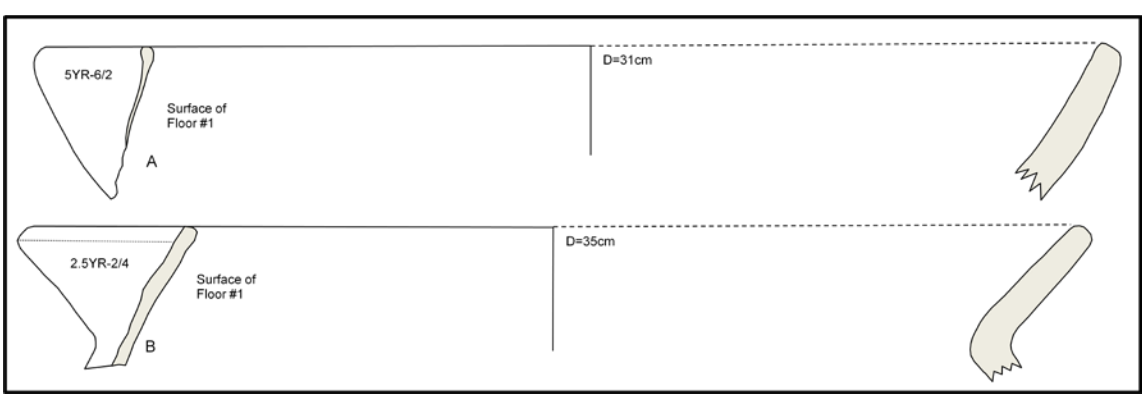


Figure 4.31 – Ceramics from LP-3 - Hearth

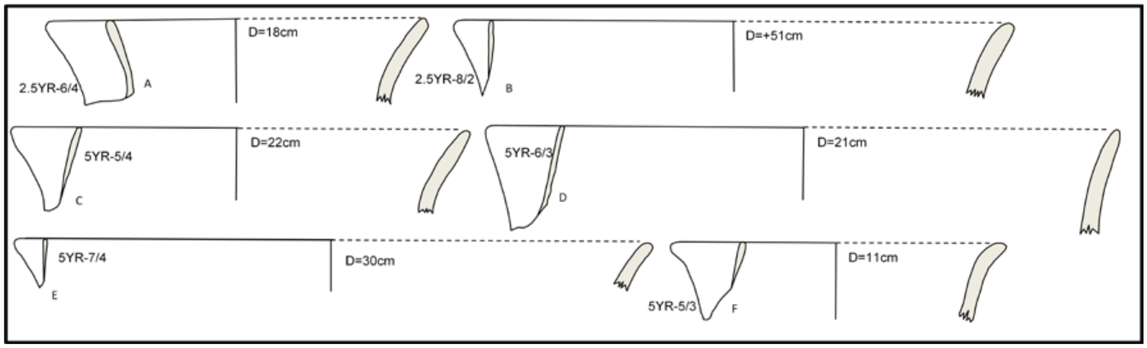
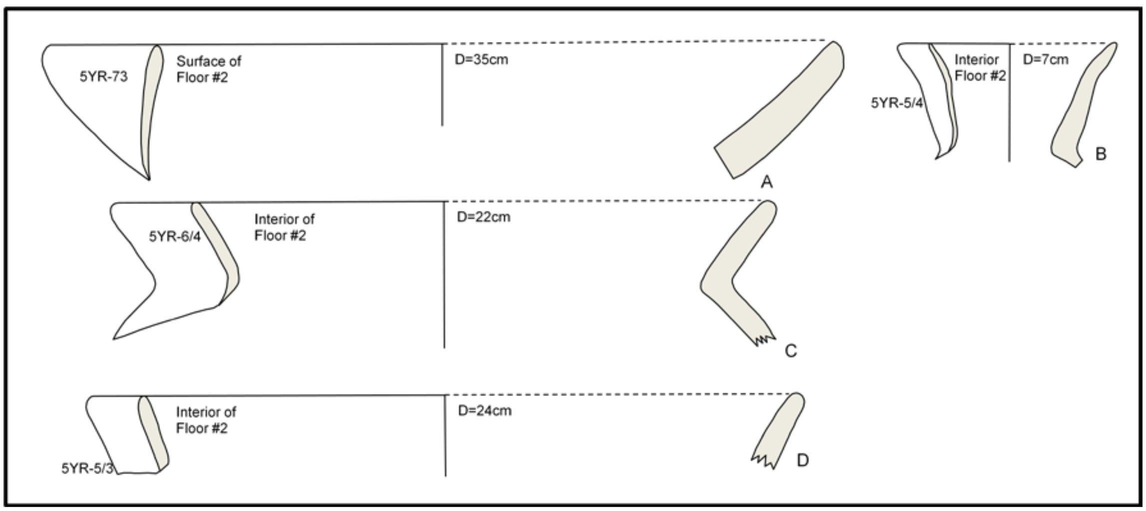


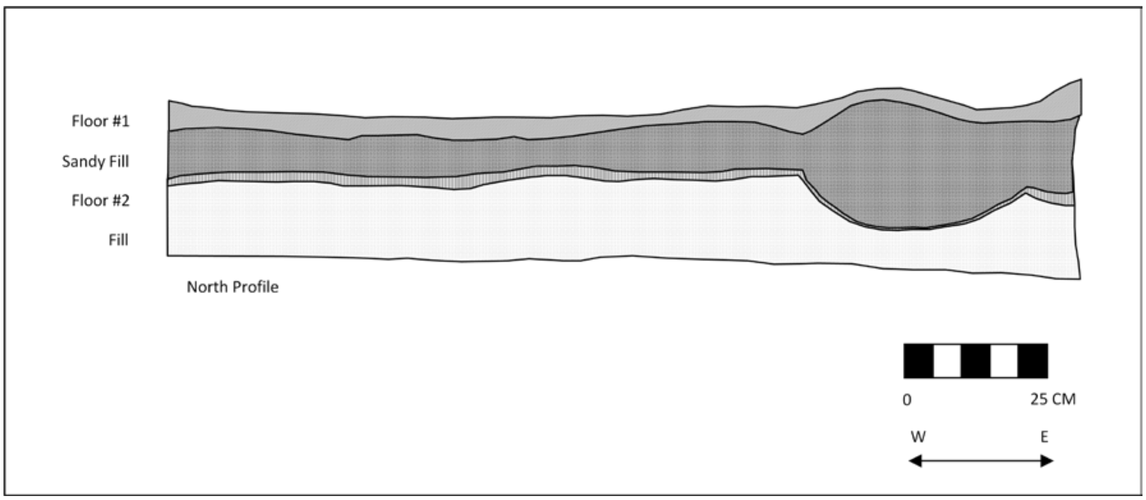
Figure 4.32 – Ceramics Associated with Floor #2



Given the copious amounts of charcoal present within LP-3, a large sample was taken from the burned area just below the level of Floor #2 in an effort to date both the burning activity and to aid in the establishment of chronological parameters for the ceramics (see Chapters 5 and 6 for detailed discussion of radiocarbon dating results). The sample returned a conventional date of 2423±42 (Sample #AA69636). While the exact relationship between this date and the ceramics resting on Floor #1 is difficult to establish, it would appear that those within the hearth and perhaps associated with Floor #2 are well-over 2000 years old, with those associated with the hearth at least a bit younger than those within Floor #2. Therefore, given the similarity between the surface ceramics and those recovered from LP-3, it could also be argued that the surface ceramics are also approximately 2000 years old.

Excavations within the major compounds also resulted in the recovery of a few ceramics in association with architectural features such as floors. Excavation within **Compound I/Unit #3** revealed two superimposed floors that were separated by a relatively thick layer of loose fill (Figure 4.33 – see also Chapter 5). Below Floor #2 was an additional layer of hard fill and then ultimately the hard desert floor.

Figure 4.33 – Profile of Excavation Compound I/Unit #3



Ceramics were found within Floor #1, the fill level below, and Floor #2. Within Floor #1, three ceramics were collected from the surface (Figure 4.34): an *olla* (A), and two possible bowls (B and C). The interior of Floor #1 contained a large *tinaja* fragment (D). Below Floor #1, a body sherd with a typical Jatanca "Ribbed Ware" (Figure 4.35) was found within the fill above Floor #2 (see also Strong and Evans 1952:314, fig. h). In the process of removing the fill, two more ceramics were found (Figure 4.36): an example of Castillo Modeled (B – see below and Strong and Evans 1952:314, fig. f) and a large *tinaja* rim sherd (A) were found resting on Floor #2. Finally, within the center of Floor #2 a likely bowl fragment (C) was found.

Figure 4.34 – Ceramics from Compound I/Unit #3 – Associated with Floor #1

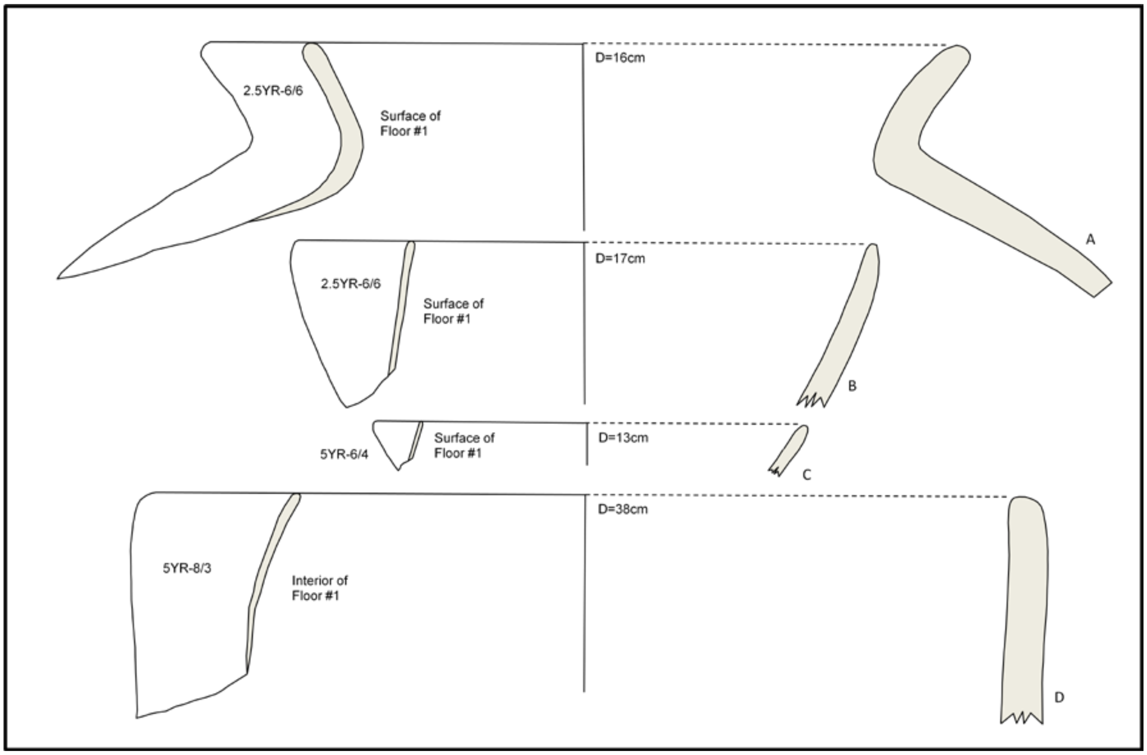


Figure 4.35 – Ceramic from Compound I/Unit #3 – Between Floor#1 and Floor #2

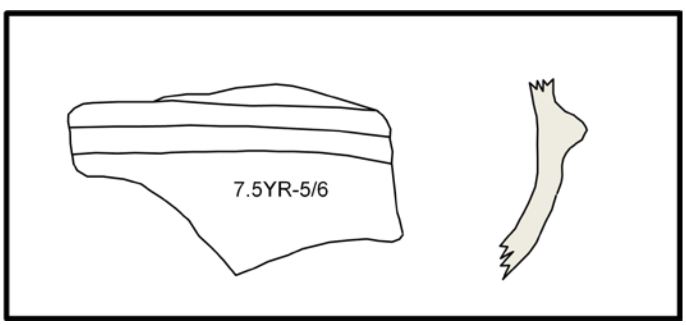
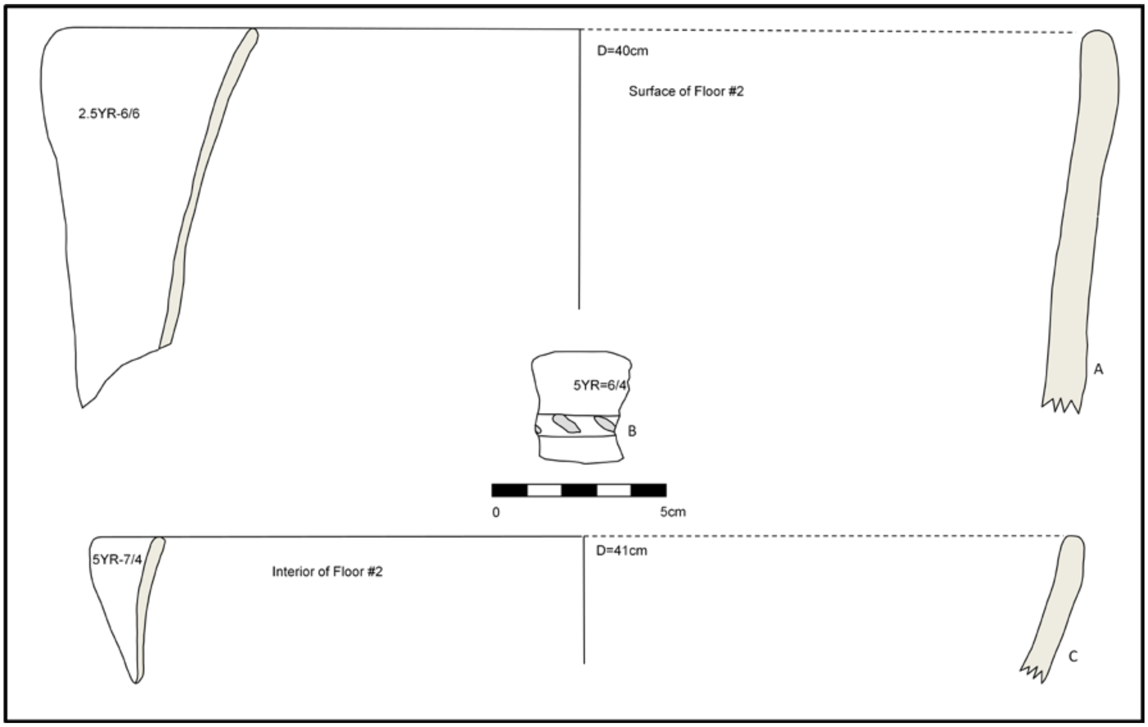


Figure 4.36 – Ceramics from Compound I/Unit #3 – Associated with Floor #2

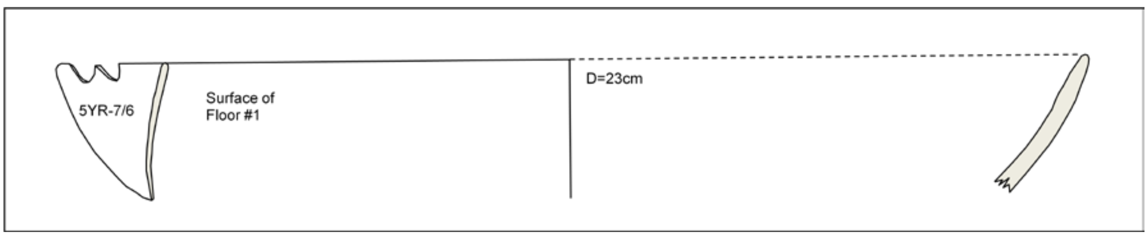


While adequate carbon in unambiguous context was not recovered from the floors or fill of this unit, it nonetheless provides critical chronological information. Both of the above sherds that have an appliquéd surface treatment (Figure 4.34 and Figure 4.35-B) are also associated with Formative Period inhabitants of the Virú Valley. Therefore, two important points can be argued:

1. Since the sherds of the same type as the two appliquéd sherds found within architectural context are also found on the surface, the surface ceramics and the standing architecture were used contemporarily.
2. Since the two appliquéd sherds found within architectural context date in use to the Formative Period within the Virú Valley (Strong and Evans 1952), it could indicate that Jatanca also dates in occupation to the Formative Period.

Finally, a small bowl fragment (Figure 4.37) was found on the surface of Floor #1 within **Compound IV/Unit #1** (see Chapter 5 for excavation details and plan). The form of this rim sherd (Crenellated Rim) has also been found within the Virú Valley where it dates in use to the Formative Period (Strong and Evans 1952). As with the two appliquéd sherds above, the identification of this type within archaeological context provides additional evidence of contemporary use between the surface ceramics and the standing architecture, and that the primary occupation of Je-1023 dates to the Formative Period.

Figure 4.37 – Ceramic from Compound IV/Unit #1 – Crenellated Rim



Discussion of Results

Unfortunately, the total number of diagnostic ceramics either whole (n=1) or partial (n=21) recovered during excavation was relatively small, so the ability to examine this material in a chronologically meaningful manner or elucidate much related to style or form dynamics, is greatly restricted. Yet a few meaningful statements can be made with regard to these ceramics when examining the data from Looter Pit #3 and Compound I/Unit #3.

With regard to Looter Pit #3:

1. The carbon date from LP-3 indicates that the ceramics within the hearth and perhaps those associated with Floor #2 date in use to well over 2000 years before present.

2. The ceramics recovered from within the hearth and Floor #2 are similar to those that make up the majority of the site-wide surface collection, which may indicate that they too were manufactured and used well over 2000 years before present.

With regard to Compound I/Unit #3:

1. The *tinaja* sherd found on Floor #1 (D) is similar in form to that found on surface of Floor #2 (A). This lack of change might indicate that little time elapsed between flooring/use episodes. It might also indicate that this type was relatively stable and underwent little change between the use of and refurbishment of Floor #2 and the abandonment of the site (see Donnan 2009; Kent et al 2009; Millaire 2009).
2. The presence of the two Castillo Modeled sherds beneath Floor #1, but above Floor #2, indicate that the site was inhabited sometime prior to, and/or during what has been identified as the Puerto Moorin – Gallinazo Period within the Virú Valley. Beyond the radiocarbon dates acquired during excavation (see Chapters 5 and 6), this ceramic data represents the best evidence that the standing architecture of the site was occupied during the Late Formative Period.
3. The presence of the Castillo Modeled ceramics between Floors #1 and #2 also chronologically and physically links the surrounding surface ceramics to the standing architecture.

With regard to all excavations:

1. In general, sherds from intact architectural contexts are similar to those on the surface, which provides an additional physical and chronological link and ties the site's visible architecture to the associated surface ceramics.
2. The ceramics recovered from excavation are similar to those found within the Virú Valley, where they date in use from the Late Middle to Late Formative Period (see Bennett 1939, 1950; Collier 1955; Ford and Willey 1949; Strong and

Evans 1952; Willey 1952). Therefore, it seems likely that the ceramics and architecture that make up the most visible portion of Jatanca are the result of a relatively contemporary local group (see below).

3. That the ceramics recovered during excavation date to the Middle-Late Formative Period is further demonstrated by a conventional radiocarbon date (2423±42) acquired from the hearth within the northwest corner of Looter Pit #3.
4. The excavated ceramics also provide further evidence that Jatanca was abandoned near the end of the Late Formative Period. No ceramic types associated with subsequent North Coast groups such as the Moche (Early Intermediate Period), Lambayeque (Middle Horizon – Late Intermediate Period), or Chimú (Late Intermediate Period) were recovered during excavation. Indeed, for all intents and purposes, the ceramic data indicate that once abandoned, Jatanca was never formally reoccupied on any kind of a large scale.

The Regional Significance of the Ceramic Assemblage

While the above ceramic discussion has centered upon two primary areas – Jatanca and the Virú Valley, it should be pointed out that domestic wares similar to those identified within both of the above areas are found within other valleys as well. For example, the Casma Valley, noteworthy for the size and number of its Formative Period sites, has numerous sites that contain ceramics that are similar to those from Jatanca and the Virú Valley (Pozorski and Pozorski 1987). Ceramics from the site of Chankillo could be classified as Castillo Incised (Pozorski and Pozorski 1987 – illustrations page 102) and would also fit in well with those from Jatanca. The same can be said for ceramics from Huaca Desvio (Pozorski and Pozorski 1987 – illustrations page 90), Pallka (Pozorski and Pozorski 1987 – illustrations page 88), and San Diego (Pozorski and Pozorski 1987 – illustrations page 60). Ceramics from the Casma Valley site of Las Haldas would be typed as Ancón or Guañape Zoned punctate if they were found within Jatanca (Pozorski and Pozorski 1987 – illustrations page 24). Examples of Castillo Incised have been identified within the Chicama Valley at the site of Mocollope among others (Attarian 2009). At the site of Huaca Santa Clara, Castillo incised vessels similar to those found at Jatanca have been published (Millaire 2009). Castillo Incised ceramics are found within numerous sites in the Santa Valley as well (Wilson 1988 – Illustrations on Pages 415 and 433).

However, despite the shared similarities and widespread distribution of Late Formative Period ceramic types, a number of valley specific differences in form and surface treatment exist as well, as made evident by the data from Je-1023. For example, despite the fact that Jatanca Type #2 rim forms are common throughout the site, this shape does not appear to have been used to the same degree within the Virú Valley, as Ford (1949) does not identify it as a type within his attribute analysis and subsequent stylistic seriation. Furthermore, there are no drawings of this form within the well-illustrated volumes published by Collier (1955), Ford and Willey (1949), or Strong and Evans (1952). There is, however, one picture of a likely example of this type within Bennett's publication of the Gallinazo Group (1950: Plate #7 – *b*), the manufacture of which he attributes to the Gallinazo culture (see below). Furthermore, while the use of neckless *olla*s appears to have been popular within the Virú Valley (see Ford 1949; Strong and Evans 1952) and the Chicama Valley (Castañeda and Vega 1991; Leonard and Russell 1992) throughout the Formative Period, this form is not encountered with much regularity within Jatanca. In fact, no examples of this general form were recovered during the controlled surface collection. With regard to surface treatment, lugs depicting animals and anthropomorphic figures were popular within the Virú Valley (Strong and Evans 1952), but were not within Jatanca, where only a few examples of this type of decoration have been recovered. The above examples demonstrate that despite their chronological proximity, Late Formative Period domestic ceramics can differ across geographic space in terms of form and decoration. Therefore, the task of explaining these valley-specific ceramic differences (both broad and subtle) within an apparently overall framework of North Coast ceramic similarity must be addressed.

In a recent publication that examines the nature of the relationship between the Moche and earlier North Coast cultures, Jean-Francoise Millaire (2009) argues that ethnically related inhabitants from all North Coast valleys produced similar domestic ceramics during the Formative and Early Intermediate Periods:

> "…The North Coast was home to a number of culturally related societies that lived in similar environments, evolved within comparable settlement systems, shared analogous political and social structures and produced material culture that emphasized their common cultural origin" (2009:2).

According to Millaire (2009), Formative Period North Coast Vernacular ceramics were not a marker of political affiliation such as "Salinar, " "Gallinazo," or "Moche," but were instead "the product of a shared artistic expression: the t*radición Norcosteño.* If Millaire and others (see Attarian 2009; Donnan 2009; Kent et al. 2009) are correct in this assessment, then the similarity between the Jatanca and Virú valley domestic ceramics can be explained as the result of a long-lasting, valley-specific expression within a broader regional tradition, or as Millaire describes it, a "rich cultural mosaic." Differences in the same region-wide assemblage are the result of idiosyncrasies at the level of the valley, or even the site. The mechanism by which these stylistic possibilities or choices were maintained, spread, rejected, and/or fostered along the coast, however, remains murky at best. Louis Jaime Castillo (2009) argues that the answer to this question may lie in the identification of periodic regional markets, festivals, and/or religious ceremonies, which "could have had a cultural harmonizing effect" and provided "loci for social interactions and contacts leading to mobility, particularly for the younger members of society, assuming that exogamy was the rule" (2009:226). Castillo's contentions seem plausible, yet further work needs to be done in order to identify the presence of these region-wide material and social transactions.

Rather than being encoded within the surface treatment or form of vernacular ceramics, cultural affiliations such as "Salinar," "Gallinazo," and "Moche" were expressed via the manufacture and use of distinct finewares. Therefore, the *Norcosteño* model also predicts that the design details of finewares might be expected to vary from valley to valley as they were "produced by individual polities to emphasize their distinctness in relation to other ethnically related neighboring groups" (Millaire 2009:2-3). In short, differences in finewares from contemporary sites are the result of the politically fragmented nature of the Formative Period North Coast (but see Fogel 1993).

Until the identification of the Norcosteño tradition, a serious problem plagued Formative Period ceramic analysis: the over identification of Gallinazo sites and occupations. Bennett's initial work within the Virú valley resulted in the widespread publication of both domestic (Castillo Modeled and Castillo Incised) and fineware ceramics (Negative resist) from the Gallinazo Group – the hypothesized capital of a valley-wide Gallinazo polity (Bennett 1950; see also Willy 1953). Unfortunately, this resulted in the conflation of both finewares and the domestic wares by North Coast archaeologists – both were considered to be equally valid indicators of a Gallinazo presence. Therefore, it was argued that a Gallinazo occupation could be recognized even in the absence of Negative Resist Wares, provided domestic wares such as Castillo Incised and Castillo Modeled were present (see Wilson 1988). The result of this was the over identification of Gallinazo sites[31] throughout the North Coast region (Donnan 2009; Millaire 2009). To counter this problem, Chris Donnan (2009) recently argued that without the presence of Negative Resist wares, the identification of a Gallinazo site or occupation is unlikely, if not impossible.

Ceramic data from Jatanca can be used to examine many issues related to the *Norcosteño* model. For example, Millaire and others (Donnan 2009) argue that the domestic ceramics associated with the *Norcosteño* tradition changed little for almost 1000 years. Data from Jatanca support this contention, as the occupation dates at Je-1023 are between approximately 500 B.C. and A.D. 200 (see Chapters 1, 5, and 6), while dates from Huaca Santa Clara in the Chicama valley range from 10 B.C. through A.D. 670 (Millaire (2009). Despite this chronological range of occupation, based upon

[31] For an example of how the use of domestic ceramics as a means of identifying Gallinazo sites has skewed archaeological interpretations see Fogel (1993) who argued that the Gallinazo Group was the first North Coast capitol of a multi-valley state.

illustrations in Millaire (2009:11) and above, both sites had similar examples of Castillo Incised within their overall ceramic inventory. Furthermore, while Formative period domestic wares may be of little value in identifying a site's cultural affiliation, according to Millaire (2009; see also Donnan 2009) finewares can be used for this purpose as their idiosyncratic construction and surface decoration was meant to advertise a polity's distinctiveness from (or allegiance with) its neighbors. In the case of the Gallinazo culture, Negative Resist ceramics are seen as the cultural indicator *par excellence* and represent a "corporate style, the production of which is largely restricted to Virú" (Millaire 2009). Yet, based upon the ceramic collection from Je-1023, this may not be the case as numerous examples of Reduced Negative wares have been found within the site from both surface and excavation context[32]. While it is possible that the vessels were "imported" from the Virú Valley, the significant differences in surface design may hint at their having been locally produced. As to whether or not the presence of Negative Resist vessels is enough in and of itself to identify a potential Gallinazo occupation as argued by Donnan (2009) is also debatable, as Negative Resist wares could have been produced by local non-Gallinazo elites within Jatanca as a means of emphasizing their distinctiveness from neighbors who were "ethnically related" as argued by Millaire (2009). Potential evidence that supports this latter scenario was found during the 2008 field season when excavation within Compound I (see Chapter 5) uncovered a number of whole vessels that were sitting directly upon the surface of Floor #1 (Swenson et al. 2009). One vessel was especially important as it was decorated with negative resist designs that are not typically associated with Gallinazo material from the Virú Valley area. The form of the upper portion of this vessel, a double spout and bridge (Figure 4.38 and 4.39) is also unique when compared to known Gallinazo (and earlier) forms from the Virú Valley (see Bennett 1950; Ford 1949; Strong and Evans 1952). Therefore, that this vessel is atypical of other known Formative Period North Coast ceramics may indicate that it was used in part to express the local or corporate identity of Jatanca. If nothing else, the presence of this vessel underscores the degree

[32] Negative resist wares have been found within excavation context during the 2007, 2008, and 2009 field season (Swenson, Chiguala and Warner 2008, 2009, and 2010).

to which despite the generally homogenous nature of North Coast vernacular ceramics, there was quite a bit of region-specific development as well.

Figure 4.38 and Figure 4.39 - Photos of Double Spout Vessel

There is an additional matter of chronological and perhaps, ethnic interest related to the Late Formative Period domestic assemblages found along the North Coast. While Millaire (2009) and Donnan (2009) argue that the use of domestic wares among groups traditionally identified as Gallinazo and Moche have little meaning, this may not necessarily be the case as it appears as though there may be some temporal and/or culture-specific aspects to at least some site-specific domestic assemblages. For example, at sites with Moche components such as Pacatnamú (Donnan 2009; Donnan and Cock 1996), Dos Cabezas (Donnan 2009), Masanca (Donnan 2009), as well as at sites that apparently lacked a Moche component but whose occupation post-dates that of Jatanca such as Huaca Santa Clara (Millaire 2009), there are numerous examples of domestic face-neck jars, and in some cases (Dos Cabezas – Donnan 2009) figurines. The number of face-neck jars and figurines recovered at Jatanca during the 2004-2005 campaign (Warner 2006) and three subsequent intensive field seasons of work (Swenson 2008, 2009, 2010) is precisely "0." This might indicate that either:

1. Face-neck jars became a part of the *Tradición Norcosteño* only after the abandonment of Jatanca, and were used as a domestic ware by later groups along with antecedent forms.
2. Face-neck jars were used after the abandonment of Jatanca and were actually an additional element of Moche corporate expression along with fine line vessels.
3. Face neck jars were used by surrounding contemporary sites, but were not a part of the corporate wares associated with the elites of the site of Jatanca.

Whatever the scenario, ceramic data from Je-1023 would indicate that there may be important chronological and/or ethnic significance to the absence of face neck jars (and figurines) at the site, perhaps somewhat contrary to the position argued by Millaire (2009) and Donnan (2009). While the absence of face-neck jars and figurines at Je-1023 does not disprove the presence of a *Norcosteño* cultural substrate, a position I generally agree with, it may indicate that some chronological and/or ethnic information can be expediently gathered from domestic ceramics. This is an important aspect of ceramic research at Jatanca, the significance of which will be examined in greater detail in subsequent publications.

To sum: surface treatment analysis indicate that while in many respects domestic vessels from Jatanca are like those from other valleys such as the Chicama, Moche, Virú, and Casma there are numerous site-specific idiosyncratic expressions as well – especially as related to finewares. These similarities and differences might be explained by the presence of a Late Formative Period *Norcosteño* tradition in which numerous culturally-related societies produced domestic ceramics that reflected a common cultural origin, but finewares were used as corporate emblems (Millaire 2009).

Ceramic data from Jatanca appear to support the validity of this hypothesis, as the surface treatments used to decorate domestic wares are remarkably like those from contemporary sites located within other North Coast valleys. Fineware surface treatments such as Negative resist, however, may reflect local patterns of expression due to their having served as a form of corporate identity that differentiated Jatanca from other contemporary North Coast Formative Period sites.

Conclusion

This chapter has examined a number of aspects related to the ceramics found at Jatanca. First, this chapter provided a summary of some of the key literature that has been published on the subject of Formative Period ceramics. That much of this material is based upon work conducted by members of the VCIAR Project within the Virú valley more than 60 years ago (Bennett 1939, 1950; Collier 1955; Ford and Willey 1949; Strong and Evans 1952), underscores the need for modern-day scholars to once again focus their attention upon North Coast ceramic development prior to the Early Intermediate Period (see Millaire 2009). However, despite the fact that the VCIAR publications are relatively old, much can still be learned from them. For example, this chapter created a simple relative chronology of ceramic development at Jatanca based upon these works. Furthermore, these publications proved to be invaluable in style-type identification, as many of the ceramic surface treatments illustrated within the VCIAR publications were easily identified within Jatanca.

During the course of the 2004-2005 field season, ceramics were collected using three major methodologies: controlled surface collection, opportunistic surface collection, and excavation. While the controlled surface collections were relatively small due to time constraints, they were nonetheless a valuable source of information. Ten forms based primarily upon rim form were identified, but there is no doubt that many more exist. It is hoped that the planned large-scale surface collection in June – July of 2010 will result in the identification of many more types – as hinted at during the examination of data collected from the opportunistic surface survey. With regard to excavation, unfortunately, floors within Jatanca are very hard and were evidently well-swept, resulting in the recovery of very few ceramics associated with floor or fill contexts (see also Chapter 5). Those that were recovered, however, were essentially of the same type as those found on the surface, providing a clear, and very important, link between the exposed architecture and the surface ceramics. Finally, unlike the Virú Valley, deep midden deposits containing ceramics have yet to be found within Jatanca. This may be the result of local taphonomic conditions, and/or indicate that Jatanca was occupied for a relatively short period of time.

With regard to surface treatment, it was demonstrated that ceramics from Jatanca are similar to those from other North Coast Valleys such as Virú, while the surface treatment associated with finewares such as Negative Resist painting could differ. The combination of similarity in domestic ceramics coupled with the dissimilarity in finewares (both in terms of form and surface decoration) may indicate that Jatanca was a distinct polity yet part of a broader *Norcosteño* tradition.

Chapter Five: The Excavations

Introduction

Before the initiation of *Proyecto Jatanca* in 2004-2005, limited excavation had taken place within the architectural confines of Jatanca. In 1938, Ubbelohde-Doering (1966) excavated within the compounds, most notably the Acropolis, where he uncovered an axially located stairway, and perhaps Compound II (Swenson et al. 2008). While the goal of Ubbelohde-Doering's excavation activity was not explicitly stated, it seems likely that he was looking primarily for burials and had little interest in the definition of architecture (Ubbelohde-Doering 1966). In 1997, *Proyecto Pacasmayo* also excavated within Jatanca – concentrating upon the western edge of the Acropolis, although some of the outlying areas, such as the canals, were also examined via excavation (Dillehay et al 1998; Dillehay and Kolata 2004). In addition, a large *huaquero* hole located to the immediate north of the Acropolis was cleaned, drawn in profile, and back-filled. Unlike Ubbelohde-Doering, *Proyecto Pacasmayo* had a number of clear-cut objectives; excavation activity was geared toward the recovery of information related to architectural form, function, ENSO events, and related episodes of reconstruction (Dillehay et al. 1998, 1999, 2000). Carbon samples were recovered from these excavations and subsequently published (see discussion below; Dillehay and Kolata 2004 - Table 8.1).

Excavations undertaken by this project were focused primarily upon the recovery of carbon samples from varied architectural context such as floor sequences and wall segments that could be used to date Je-1023 compound construction, occupation, and abandonment. In addition, this project also excavated within the canals system that surrounds Jatanca in order to identify potential cleaning and refurbishment episodes and recover carbon which could be used for radiocarbon dating. In addition to the recovery of carbon, it was also hoped that excavation might provide evidence of some of the specific activities that took place within the compounds (see Chapter 6). Finally, it was also hoped that diagnostic ceramics would be located in association with architectural features, especially floor sequences, so as to be able to better-tie the surface ceramics to the standing architecture and establish contemporaneity between the two data sets (see Chapter 4).

Pre-Excavation Planning

Excavation within Jatanca was undertaken during the months of May, June, and July of 2005 and was initially planned for three major areas of the Pampa Mojucape: Jatanca, the surrounding canals, and the nearby Late Intermediate Period site of Tecapa (see Chapter 3). However, during mapping it was determined that the large amount of sand within Tecapa prohibited excavation given the small crew being used during the excavation campaign. Therefore, the time and financial resources initially allotted to excavate within Tecapa was reassigned, resulting in a more detailed understanding of Jatanca and the surrounding canals.

The location of the excavation units within Jatanca was determined after considering a number of factors. For example, large rooms with high walls that were filled with sand were avoided due to labor/time concerns. Instead, units were generally placed within small rooms, or within a portion of a large room that had a minimal amount of sandy overburden above the floor. Rooms that had heavily deflated floor surfaces due to wind abrasion or had been eroded by flooding were also avoided out of contextual concerns. Ultimately, the excavation units were distributed between the Acropolis, Compounds I-IV and Compound VI, and two of the canals associated with the perimeter of the architectural core. The compound-interior units were located within a variety of room sizes and preliminarily identified "types." Room size varied from approximately 1m x 2m up to 17m x 26m, and room types were based upon criteria such as "public" versus "private" space. For example, some of the units such as C1-U2[1] and C4-U1 were placed within relatively "public" areas that could have been used for site-wide ritual activity (see Chapters 6 and 7) while others were placed within more difficult to access "private" areas located deep within the compounds (see Chapter 6).

[1] C1-U2 = Compound 1, Unit #2; C4-U1 = Compound 4, Unit #1; etc….

Specifically, C1-U4 was located within what was hypothesized to be a relatively accessible room, while C1-U1, C2-U1, C3-U1, or C4-U2 were placed within difficult to access areas (see Chapter 6). Rooms that were unique compared to their neighbors were also tested. For example, C1-U5 was placed within a deep-walled room with no visible access; a situation that is quite rare within Je-1023 where doorways were almost always used to gain room access. All of the above units were positioned against at least one wall and were oriented in the general direction of the architecture.

The Field Excavations

There was very little variation in the excavation procedure used within the Jatanca compounds. Typically, after the surface collection was made and the loose, sandy overburden (as deep as 1.5m) was removed, hard, tapia floors were encountered within each unit. A 1m x 2m area of the uppermost floor was exposed, drawn, and sampled (approximately one-gallon) for later flotation. In certain cases, unit size varied due to a number of factors such as the presence of internal features, excessive amounts of sand, and overall room size. After clearing off a portion of the uppermost floor, a smaller test unit (generally 50cm x 50cm, but larger units were also used) was placed within a corner of the 1m x 2m unit, or against one of the tapia walls and excavated down to sterile soil so as to ensure that all of the construction sequence had been recovered. Once completed, the sub-unit was drawn and then carefully peeled back by stratigraphic layer so as to recover carbon from each intact floor, fill level, and feature. All artifacts and carbon samples were double-bagged in the field and entered onto an inventory sheet. Profiles and plans of all excavations were drawn in the field, and unit locations were recorded on master maps created during the mapping phase of this project (see Chapter 3). Although this project had initially planned to place several trenches within the compounds as well, time considerations did not permit excavations of this form – especially given the desire to acquire carbon from as many excavation units as possible for the purpose of establishing a site-wide architectural chronology.

After excavation had concluded, the floor samples were processed in Pacasmayo and given to Victor Vasquez of the University of Trujillo for subsequent ethnobotanical analysis. While plant and faunal remains were not generally visible within the floors at the time of collection, flotation resulted in the collection of considerable amounts of organic remains. A summary of the ethnobotanical results from each unit and general synthesis is provided below.

As with the architecturally located units, there was very little variation with regard to the general excavation procedures used for the two canals selected for excavation. A diagonal cut was made through the entirety of the canal and excavated down to sterile soil. Carbon was collected from the exposed profile and double-bagged. Finally, the exposed profile was drawn, and the location of the unit was located on the master map.

While the above units were placed within relatively undisturbed context, those within the Acropolis were not. Instead, already existing huaquero pits were cleaned out, squared off, and drawn. Carbon samples and artifacts located within wall profiles were collected as well. The decision to use the already existing *huaquero* holes was based upon there being many to choose from and that many of these were located within areas that were considered to be desirable to sample. The use of already-existing *huaquero* holes also reduced the amount of excavation needed to reach sterile soil, and minimized additional "destruction" to the surface of this important feature before it could be mapped with a total station. Finally, since one of the major goals of the project was to recover carbon from architectural context, the *huaquero* holes could be "pre-examined" in order to determine the viability of recovering adequate sized samples within unambiguous architectural association. The limitation to using *huaquero* holes as a collection strategy is the lack of flexibility in unit placement. However, in light of the above positive factors, the use of pre-existing huaquero holes for carbon collection was deemed to be more than satisfactory for the purposes of this project. After INC inspection, in August of 2005, all of the above units were backfilled.

There is no doubt that excavation units within Jatanca were relatively small and that larger units (in terms of area) might have been an aid in determining specifics related to room organization and function[2]. However, given the local taphonomy, budget of this project, and the time available for the excavation phase, the use of 1 x 2 meter units and even smaller test units was deemed necessary. However, in terms of the recovery of carbon from intact architectural features such as floors, the 50cm by 50cm sub-units were more than adequate to recover carbon from identifiable floor sequences. It should also be noted that when available, huaquero holes were also inspected in order to gain insight into construction sequences and that, on occasion, carbon samples were procured from their interior.

The remainder of this chapter is broken into two main parts: description and analysis. First, a plan, profile drawing, and brief description of all of the units are presented so as to familiarize the reader with the general excavation conditions, features, and artifacts encountered during each of the fourteen architecture-based units and two canal cuts. After this, a detailed analysis of the various data sets acquired during excavation, such as the ethnobotanical material and radiocarbon dates, are presented. Special attention is given to matters of chronology as determined by the radiocarbon dates, ceramics, and construction sequences as these data are critical to subsequent chapters. Finally, when applicable, an additional table is provided that contains base-line information on any carbon samples that were collected and processed from a given unit.

Compound I

Excavations were initiated within Compound I (Figure 5.1), the largest and most internally complex of the compounds as determined by the number of rooms, zones,

[2] However, it should be pointed out that three subsequent seasons of work at Je-1023 by the better-funded *Proyecto Jatanca/Huaca Colorada* have confirmed that floors within the compounds were kept meticulously clean as demonstrated by the excavation of entire room blocks during the 2007, 2008, and 2009 field seasons (Swenson et al. 2008, 2009, 2010). Therefore, it is doubtful that units larger than those put in by Proyecto Jatanca would have resulted in much more room-function data.

and linking hallways (see Chapters 1 and 6). The five units placed within this structure were located within as a wide a variety of areas and room-types as possible:

CI-U1 = small room (ca. 7m x 11m) in a “private” area (see below)

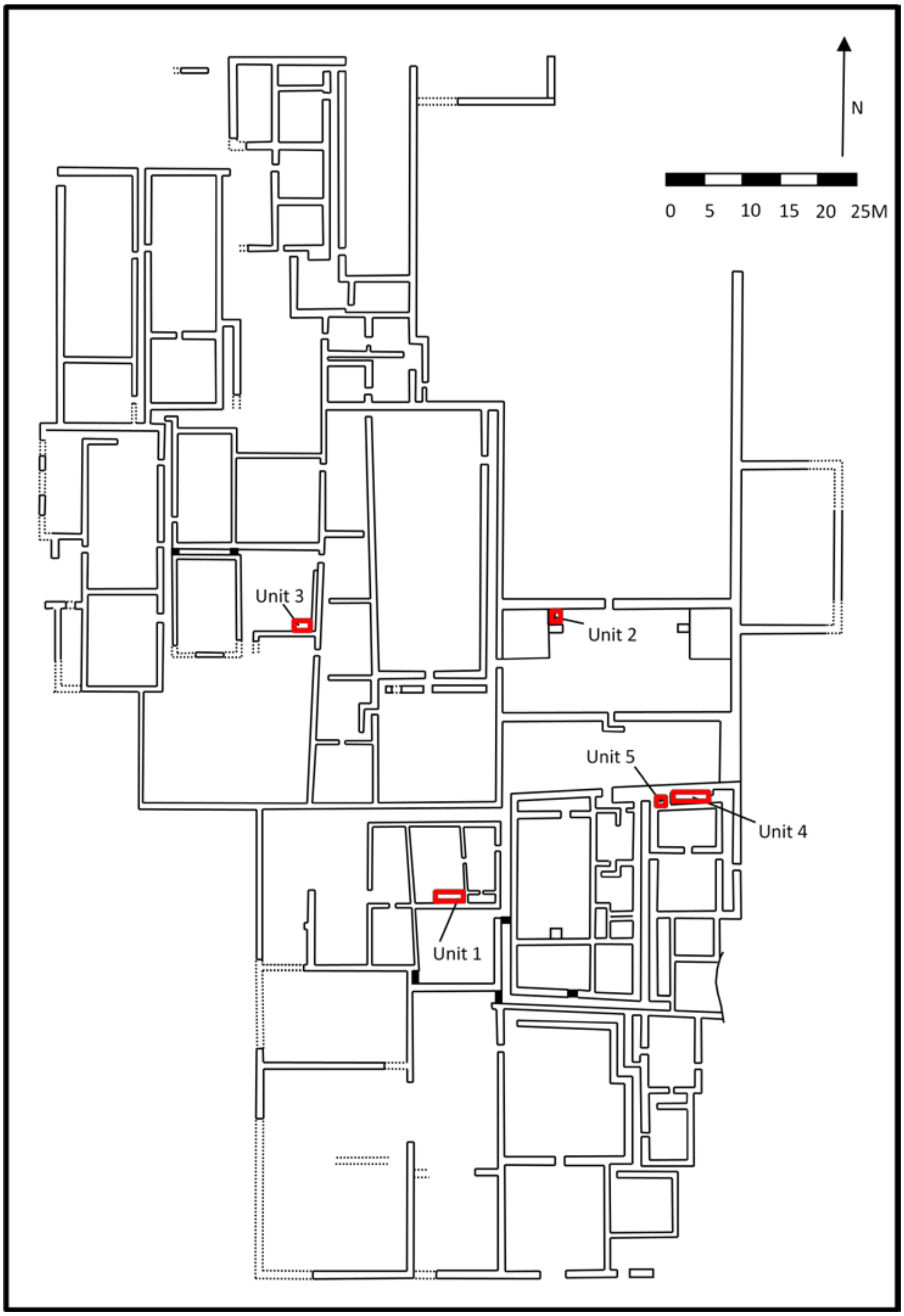
CI-U2 = large room (ca. 11m x 32m) within “public” area (see below)

CI-U3 = medium room (ca. 11m x 11m) within northern zone

CI-U4 = small room (ca. 5m x 2m) directly accessible from exterior entry

CI-U5 = small room (ca. 2m x 1m) with no visible entryway

Figure 5.1 – Compound I Unit Location



Compound I/Unit #1 (For location see Figure 5.1)

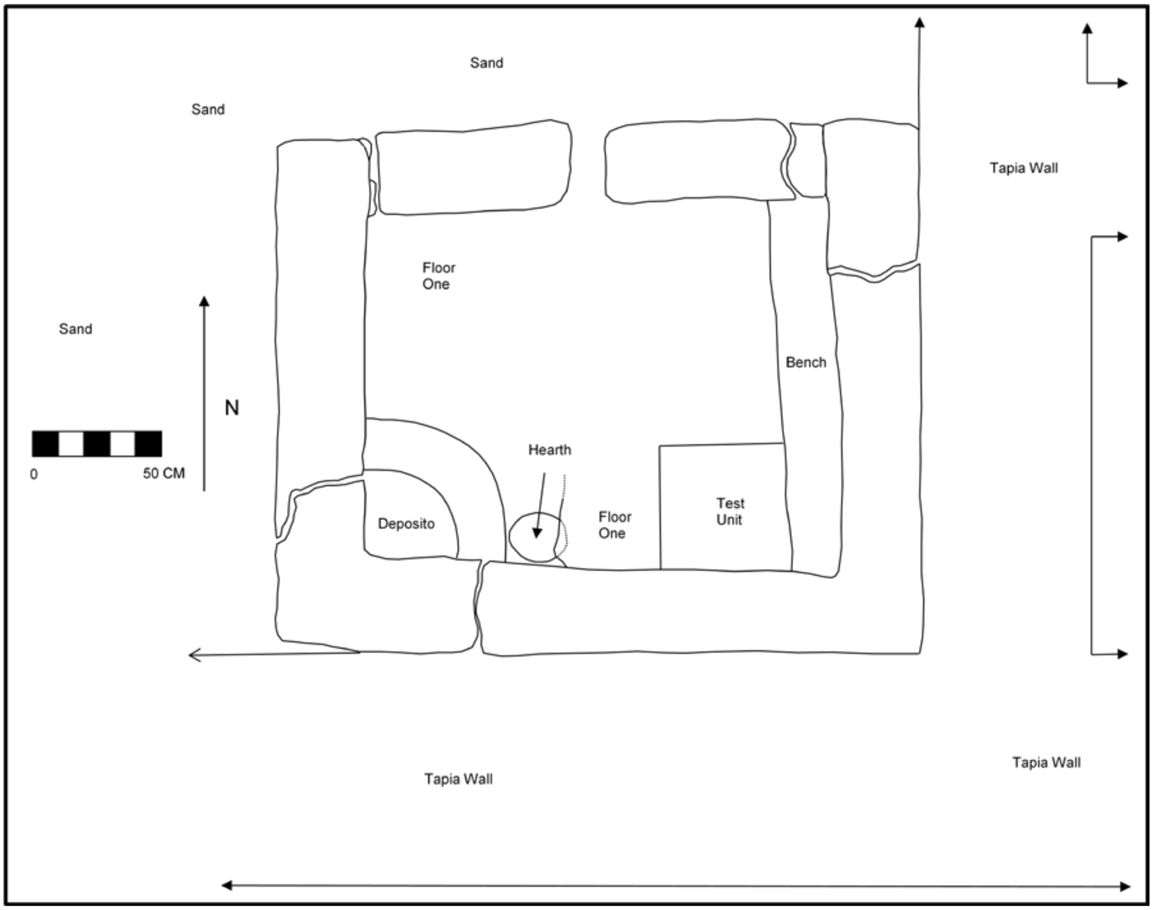
This unit was located within the approximate of Compound I within room #32 so as to sample a relatively "private" (see Chapter 6) area of the compound (Figure 5.1).

CI-U#1 was placed against the southern wall as the sand in this area appeared to have depth sufficient to have protected the underlying architecture. Somewhat unique, Room #32 is in close proximity to the ramp/platform/plaza complex located to the immediate east and made up of rooms #21, #22, and perhaps #23 (see Chapter 6 for detailed discussion).

The initial area of this unit was staked out approximately 1.5m x 2 meters. The surface of the unit contained a light smattering of sherds, but nothing was of diagnostic value. There was approximately 1.2 meters of sand between the surface and floor #1. There was no indication in any of the overburden that the unit had been looted.

As it turned out, CI-U#1 is also unique in that it contained features not found within other excavations undertaken during the 2005 excavations such as an elevated bench, a hearth, and a *deposito*, all of which are directly incorporated into the associated floor sequence (Figure 5.2). The bench, constructed of tapia, was approximately 5-10cm high, 20cm wide, and ran the entire length of the eastern portion of the room. The hearth was contained within a bowl-shaped indentation that was approximately 20 cm in diameter at the moth and was incorporated directly into floor #2. That the bowl-shaped indentation had not been incorporated directly into floor #1 was obvious as a small section of floor #1 overhung the eastern edge of the depression. Finally, the southwestern corner of the unit contained a storage pit, or *deposito* that was made by combining a bowl-shaped indentation in the floor sequence (much like that associated with the hearth) with one-quarter ring of tapia approximately ten centimeters high.

Figure 5.2 – Plan of Compound I/Unit #1



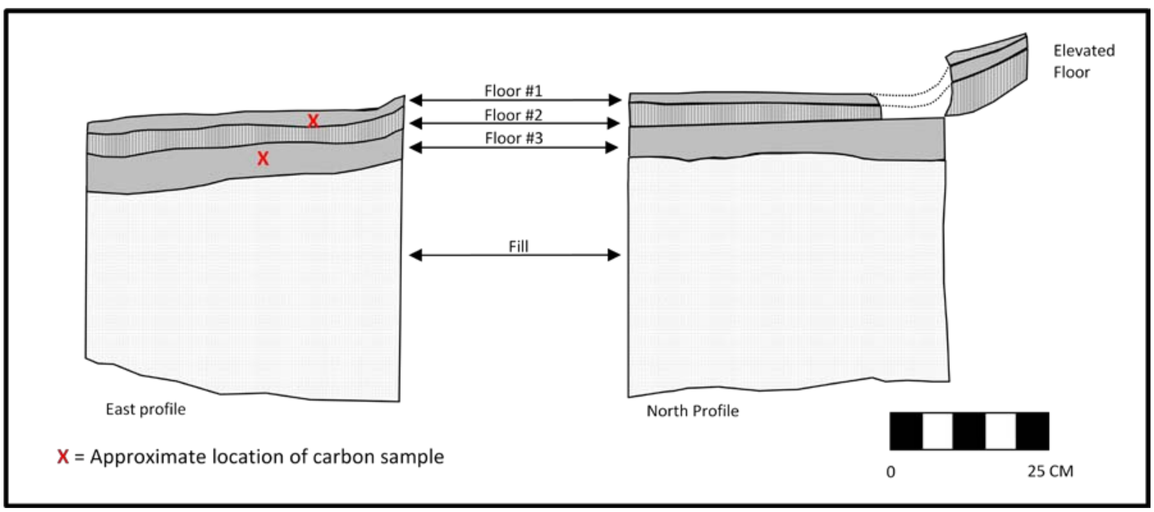
As the features were discovered, CI-U1 was expanded to the west and north in order to define the interior boundary of the room. As a result, the presence of a narrow north entry and additional low-lying walls covered with a smooth stucco finish were also exposed[3]. In general, the preservation of the architecture that makes up this room is excellent, although a few large cracks were evident within the low-lying walls.

The sub-unit was placed within the southeastern corner of CI-U#1 as this was one of the few places that a 50cm x 50cm unit could be located and not destroy any portion of a feature. In addition, by placing the sub-unit against the southern wall, it was hoped that if a footer was used in construction, it would be identifiable in the south

[3] This room and the entire surrounding room block were excavated in 2008 by Proyecto Jatanca/Huaca Colorada. For results see Swenson et al. 2009.

profile. Sub-unit excavation revealed the presence of three hard, compact floors – all of which were continuous throughout the unit and directly bonded together (Figure 5.3). The preservation of these floors was excellent and provided numerous carbon samples, two of which were pulled from the east profile and used for radiocarbon analysis along with a large ash sample[4] from the hearth and a large chunk of carbon pulled from the stucco covering the southern wall above the sub-unit (Table 5.1). The interior of the *deposito* was collected in entirety for later ethnobotanical and faunal processing. Unfortunately, no ceramics or lithics were recovered from primary context within this unit, despite being excavated to a depth of almost 75cm.

Figure 5.3 – Profile Compound I/Unit #1



[4] This sample was run by *Proyecto Jatanca/Huaca Colorada*

Table 5.1 – Radiocarbon Dates Compound I

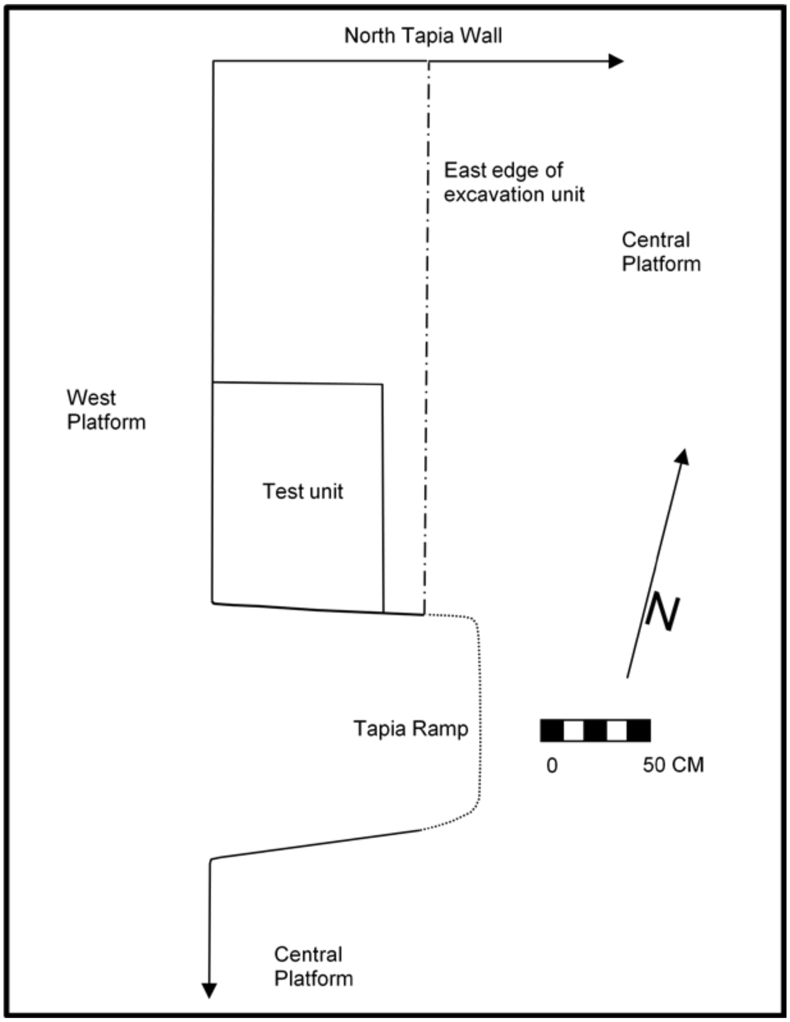
Sample/Lab Number	Unit Number	Excavation Context	Date BP
AA69630	Compound I/Unit 1	South Tapia Wall	2163±49 BP
AA69631	Compound I/Unit 1	Interior of Floor #3	2114±33 BP
AA69629	Compound I/Unit 1	Interior of Floor #1	2062±44 BP
Beta 260943	Compound I/Unit 1	Interior of Hearth	2020±40 BP

Compound I/Unit #2 (For location see Figure 5.1)

This unit was placed within an elevated room that contains two ramp/platform features set in mirror opposition to each other. CI-U2 was located adjacent to the western ramp/platform feature at the northern junction of the ramp and platform. There was very little sandy overburden within this portion of the room which made the ramp both visible and easily accessible. This room is somewhat unique due to the presence of the ramp/platform features and the northern plaza that fronts the entirety of the northern edge (see Chapter 6 and Chapter 7 for a detailed discussion of this architectural complex).

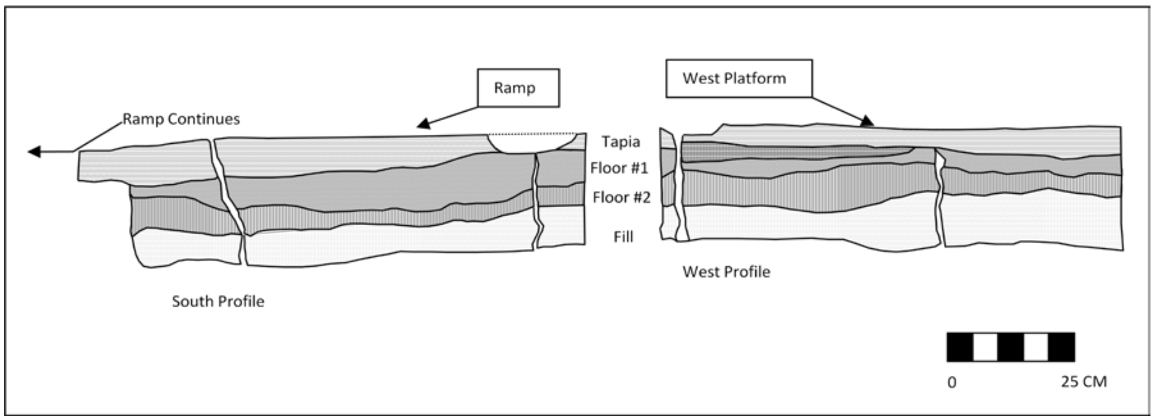
This unit was staked at 1m x 2.5m and was placed on the central platform so as to examine the floor sequence for possible repair episodes, burning, and to collect carbon from within one of the ramp/platform rooms (Figure 5.3; see also Chapter 6). The surface level of this unit was relatively free of debris and no diagnostic surface ceramics were identified. After clearing the sand down to the surface of floor #1, a poorly-preserved, thin floor was exposed that was broken away completely in areas, exposing underlying floor #2. Despite the breaks in floor #1, there was no evidence that this area had been looted, despite the presence of a ramp and large platform.

Figure 5.4 – Plan of Compound I/Unit #2



A sub-unit approximately .75m x 1m x 25cm was placed within the area where the north side of the ramp meets the platform. This location was picked in part due to the fact that floor preservation within this area was generally good. This unit revealed the presence of only two poorly preserved, thin floors that were directly bonded together (Figure 5.5). Both floors were made of heavily compacted tapia-like material and were bonded directly together. Floor #2 was bonded directly to a layer of hard, clean fill. While it was difficult to be certain, it appeared as though some floor sections had been repaired, but this appearance could also have been created by the juxtapositioning of poorly mixed floor material, or soils that had different material compositions. No ceramics or lithics were recovered from primary context within this unit, nor were any additional features identified. There were small bits of carbon, however, located within the floors of the test pit that was collected for possible radiocarbon dating.

Figure 5.5 – Profile Compound I/Unit #2



Compound I/Unit #3 (For location see Figure 5.1)

CI-U3 (1.5m x 2m) was placed in the southeast corner of room #64 in an effort to sample one of the medium-sized rooms within the northwest portion of Compound I - an area that has several formal entrances that permit interior passage (see Chapter 6). Also factoring into the selection process was the minimal amount of sand that appeared to cover the floor and the high southern and western walls that, arguably, could have helped with floor preservation by reducing wind erosion (Figure 5.6).

Several diagnostic domestic ceramics were found within the surface collection of this unit (see Chapter 4) along with some expediently produced unifacial lithics. Floor #1 was located approximately one-meter below the surface and appeared to be free of any looting activity. This primary floor was distributed continuously across the unit and was relatively soft. Diagnostic sherds were found on the surface (see Chapter 4).

Since floor #1 was composed of lightly compacted material that appeared to contain numerous sherds, the original 50cm x 50cm test unit was expanded 1.5 meters to the west (Figure 5.7). Excavation revealed that floor #1 was approximately 2-3cm thick and in relatively good condition despite its generally friable nature. Beneath this floor was a layer of 5-10cm of loose fill composed primarily of sand. Floor #2 was about 2-3cm thick, and unlike floor #1 was in relatively poor condition. Nonetheless, ceramic and lithic material was found in association with this floor, but in much smaller quantities than that encountered within Floor #1. Carbon samples, bone, and shell (*donax*) were recovered from both floors and collected for additional analysis (see below). This unit was terminated at approximately 30cm of depth once a layer of sterile hard fill was encountered beneath floor #2.

Figure 5.6 – Plan Compound I/Unit #3

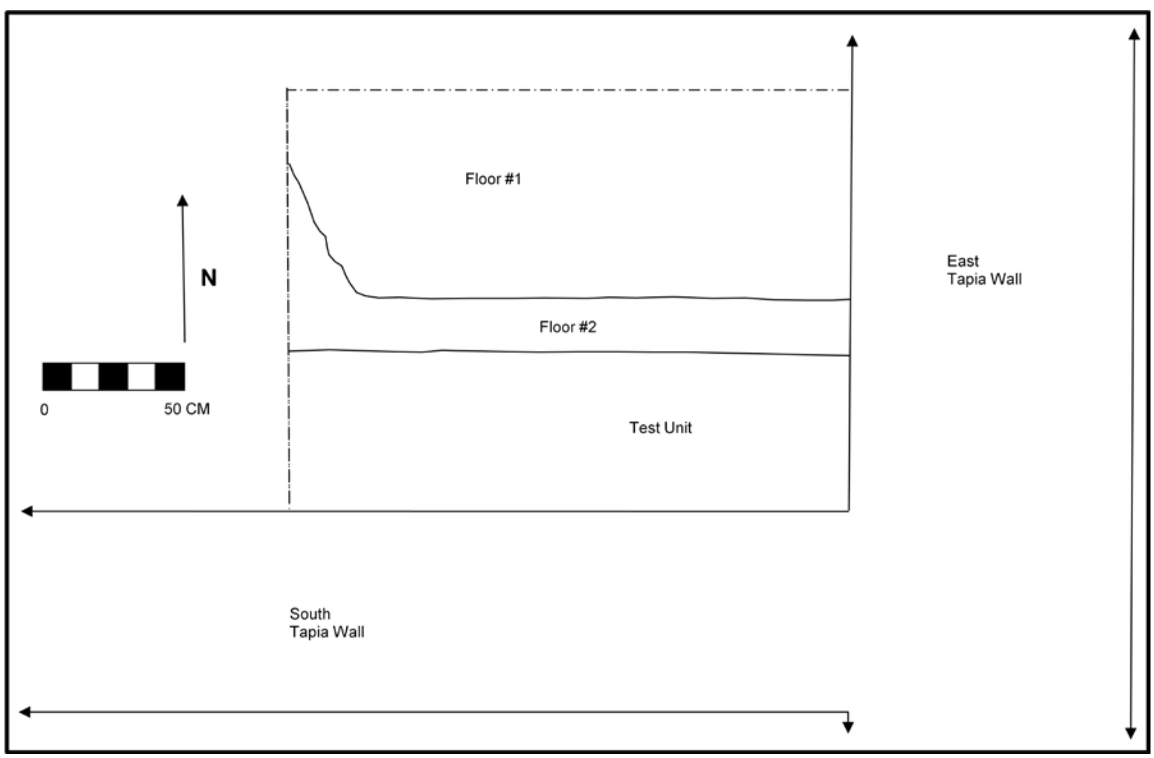
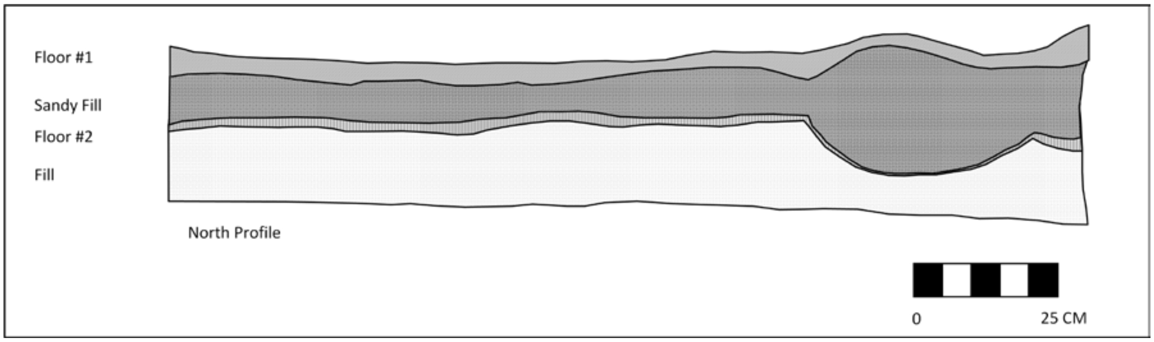


Figure 5.7 – Profile Compound I/Unit #3



Compound I/Unit #4 (For location see Figure 5.1)

This room (room #15) was selected for excavation due to the presence of an entry that permitted more or less direct interior access from the eastern exterior of Compound I (Figure 5.8). The unit was begun in the west, but was quickly expanded to the east in order to expose the total interior parameters of room #15, terminating excavation in the east at the point of the small north baffle (unit size = approximately 2.5m x 1.5m). The initial unit was expanded due to two related factors: a small bowl (Figure 5.9; see also Chapter 4) was found within the western edge of the original unit; and the small size of this room and the baffle made it possible to expediently remove the overlying sandy fill and examine an entire floor.

The majority of floor #1 was covered with a layer of tapia melt that had fallen off of the north wall and become adhered to the surface of floor #1, perhaps due to heavy rains as the bond between the wall fall and the surface of the floor was tight and almost seamless. Some loose segments of tapia were located near the entryway and these too had a melted appearance and were well-bonded to the underlying layer of wall fall. The bowl in the western portion of the unit straddled the thin edge of wall fall and floor #1. While the wall fall may have moved the bowl from its original position, it still seems likely that the bowl was originally abandoned within this room as it dates to the Formative Period (see Chapter 4). This room did not have the appearance of ever having been looted.

Figure 5.8 – Plan Compound I/Unit #4

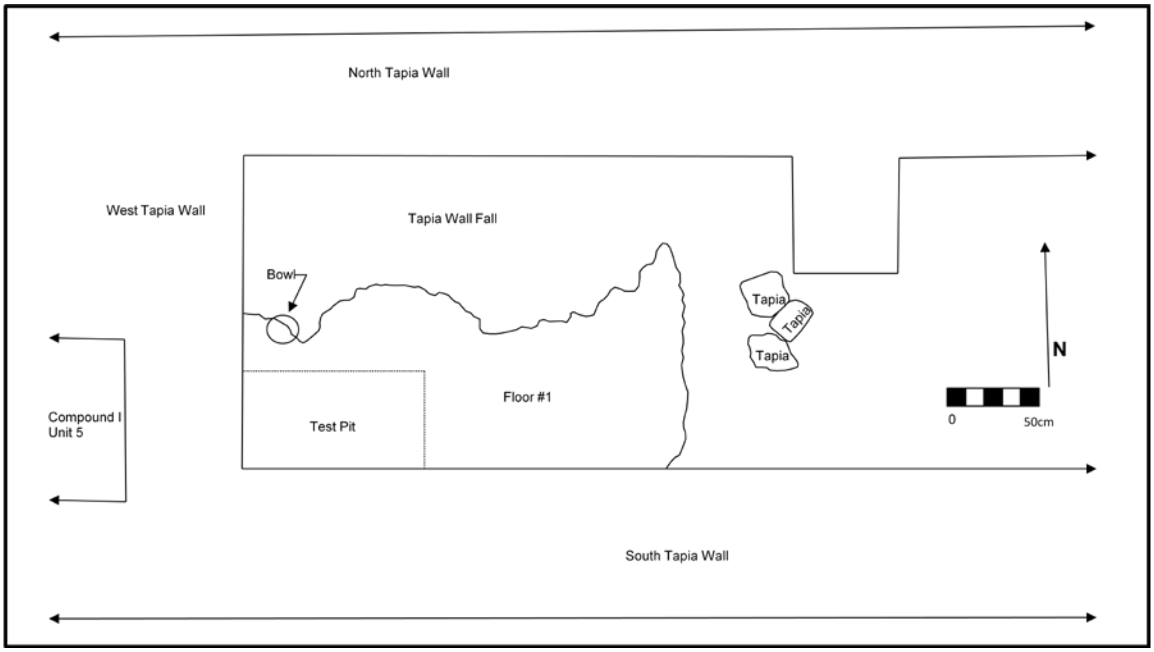
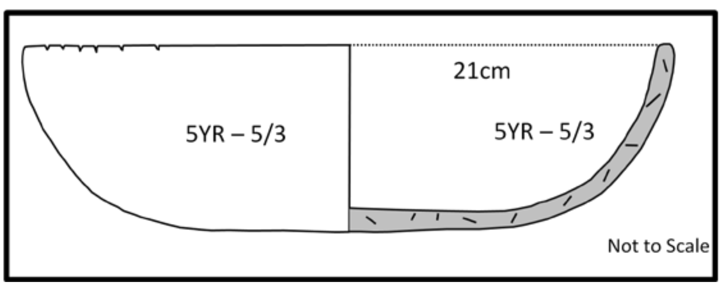
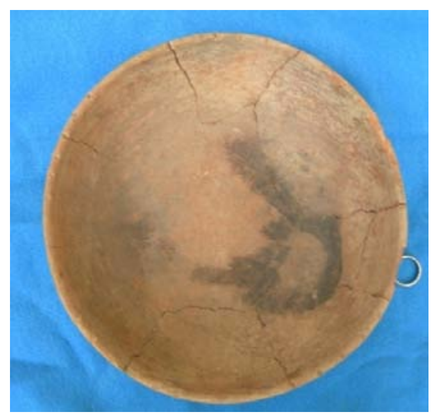


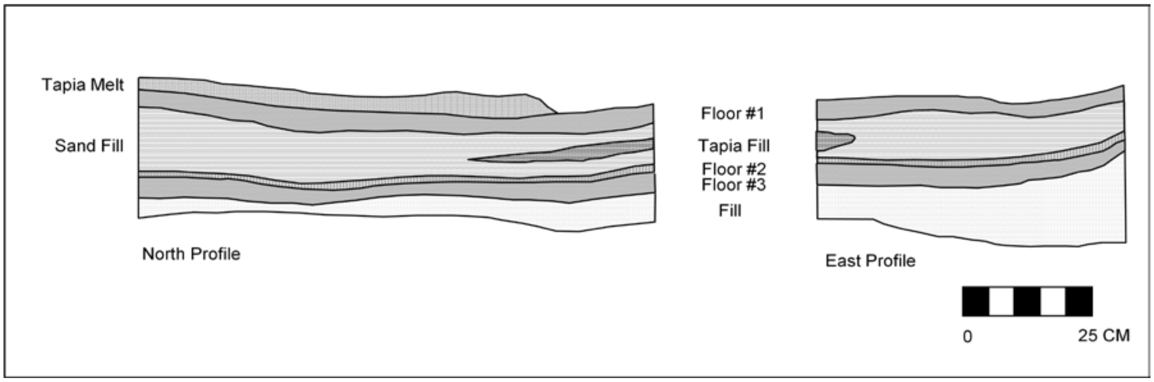
Figure 5.9 - Bowl from CI/Unit #4





The test unit (50cm x 1m) was located in the southwest corner of the exposed area in order to avoid having to dig through the wall fall. The unit was excavated to a depth of approximately 25cm, revealing three floors – all of which were well-preserved and ranged in thickness from 3cm to 5cm. (Figure 5.10). All of the floors were made of the same hard, tapia-like material. Between floor #1 and floor #2 was a lens of clean sand and small, irregular pieces of tapia. Floor #2 and floor #3 were directly bonded, with the exception of the northeast corner of the unit where there was a small lens of sand that was not removed prior to laying the foundation of floor #2. The floors and fill of this sub-unit did not contain any artifacts.

Figure 5.10 – Profile Compound I/Unit #4



Compound I/Unit #5 (see Figure 5.11)

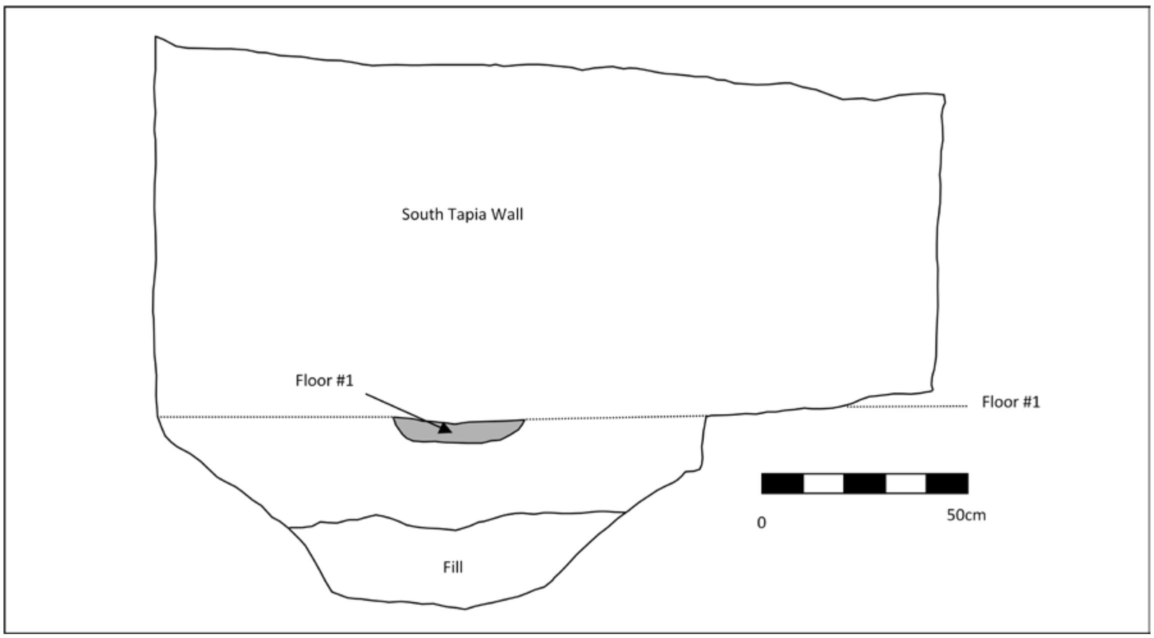
This unit (1m x 2m) was placed within room #14 for several reasons. First of all, there was no visible entry into the room – a unique feature within the Jatanca compounds. Furthermore, the small size of this room coupled with the lack of any kind of entry through which loose sand could spill, would facilitate in the exposure of the entire floor, and not just a percentage. In addition, it could not be helped but to notice that the dimensions of this unit would neatly accommodate a burial.

Once the sandy overburden above floor #1 was removed, it was discovered that this unit had been looted sometime in the recent past. First of all, the vast majority of floor #1 was missing; only a small portion was still adhered to the north wall that defined the unit (Figure 5.11). Furthermore, the surface of both the north and west wall and the fill had scrape marks that were clearly made by a modern-day shovel. Based upon the absence of any human bone or artifacts within the bottom of the unit, the looters probably did not encounter a burial.

While the looter activity made it difficult to know for certain, it appears as though this unit had only one floor. This floor was hard in texture and approximately

10cm thick. Determining how it articulated with the fill below was impossible as the looters had cut deeply into the fill in likely anticipation of recovering a sub-floor burial. Due to the wholesale destruction of this unit, it was photographed and drawn, but did not receive much else in the way of post-excavation attention or collection.

Figure 5.11 – Profile Compound I/Unit #5



Compound II

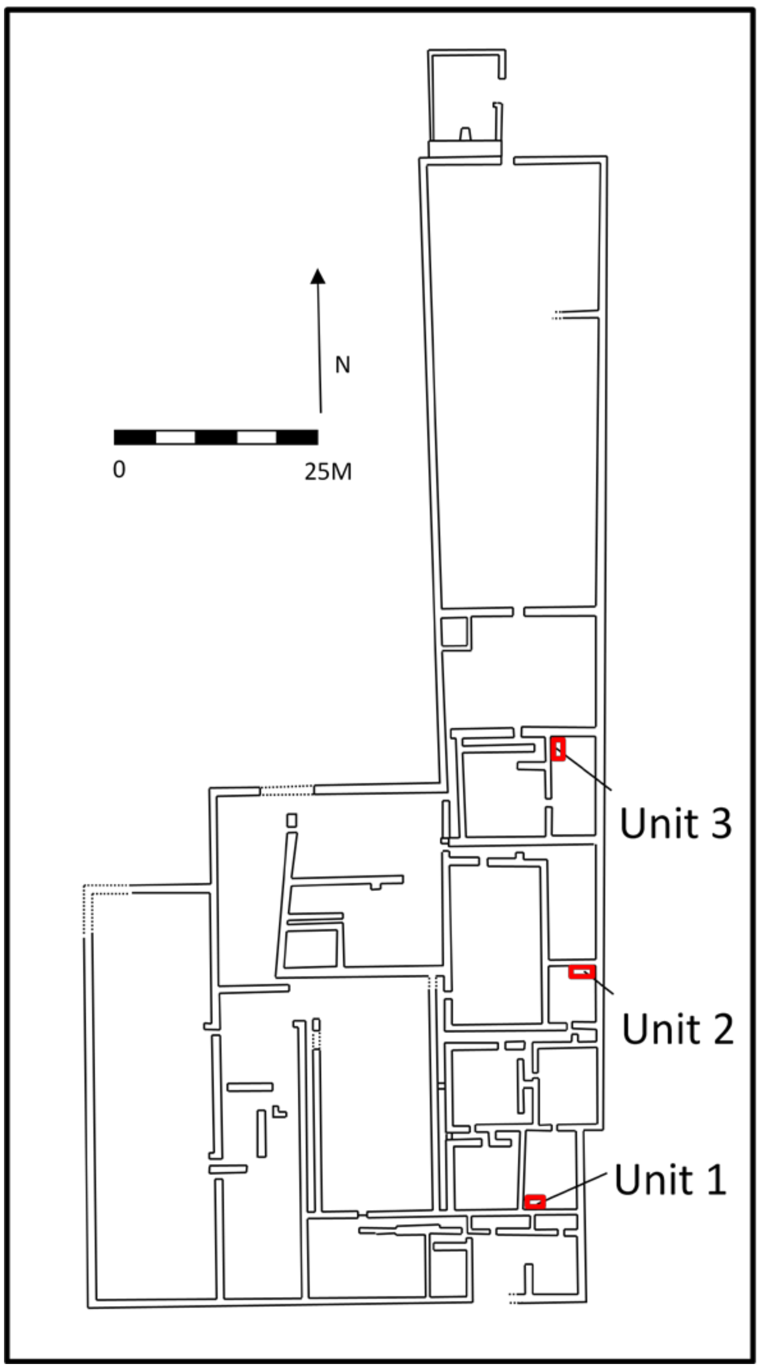
Compound II (Figure 5.9) is the best-preserved of the compounds. Like Compound I, Compound II is composed of a series of conjoined rooms connected via direct and baffled entries and long hallways (see Chapters 1and 6). Unfortunately, this structure also contained quite a bit of sand which restricted unit placement to the eastern sector. In addition to spreading the units evenly throughout the area, the three units excavated within this compound were placed with reference to accessibility and the presence of surface features, which resulted in the following distribution:

CII-U1 = medium sized room (ca. 11m x 7m) in “private” area

CII-U2 = medium sized room (ca. 8m x 7m) that contained a post-hole

CII-U3 = medium room (ca. 13m x 6m) that overlooked the public plaza (see Chapter 6)

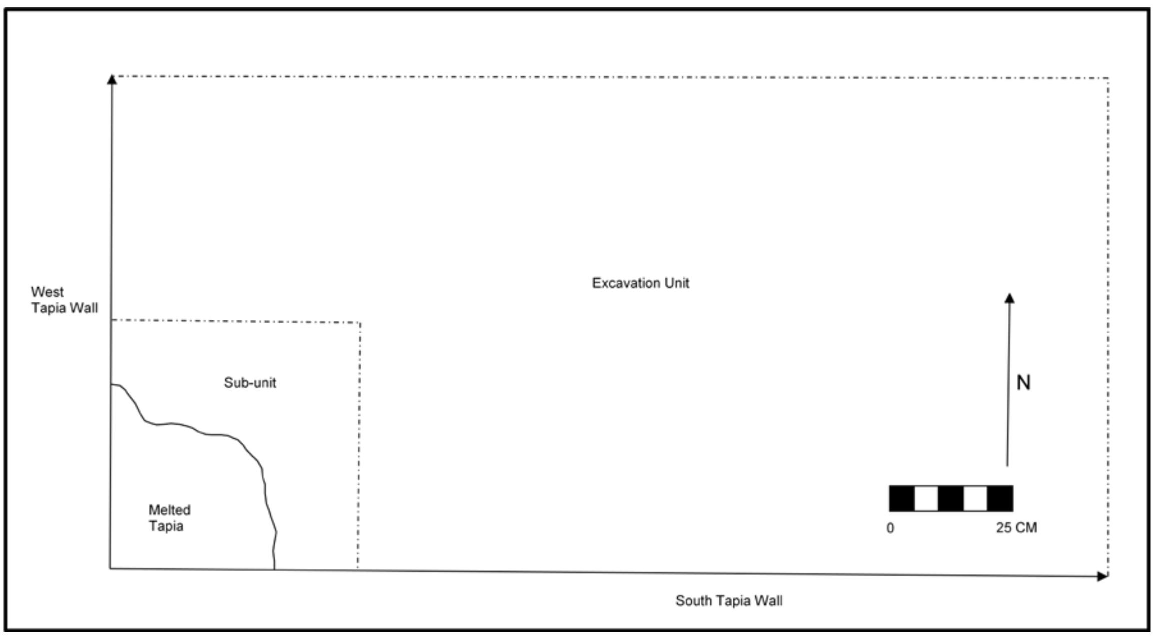
Figure 5.12 – Compound II Unit Locations



Compound II/Unit #1 (For location see Figure 5.12)

This room (room #11) was selected for excavation in an effort to sample a relatively "private" area within the eastern sector. The unit (1m x 2m) was placed against the southern wall of the room as preliminary inspection indicated that this area of the floor was well-preserved by the high walls (Figure 5.13). Once the artifact-free overburden was removed, however, it was discovered that a large pile of tapia had melted from the south and west walls, forming a hard, tightly-bonded layer above floor #1. No evidence of looting or artifacts was found in association with floor #1 of this unit.

Figure 5.13 – Plan Compound II/U#1



The sub-unit (50cm x 50cm) was placed within the southwest corner of the unit and was excavated down to approximately 25cm in depth at which point it was obvious that this unit contained only one thick floor (approximately 15cm deep) that was directly bonded to the hard desert pan (Figure 5.14). This floor was in excellent condition and was constructed of hard, tapia-like material. A single carbon sample was removed from the north profile of this unit and was used for radiocarbon dating (Table

5.2). No artifacts were recovered from either the interior of the floor, or the underlying fill.

Figure 5.14 – Profile Compound II/U#1

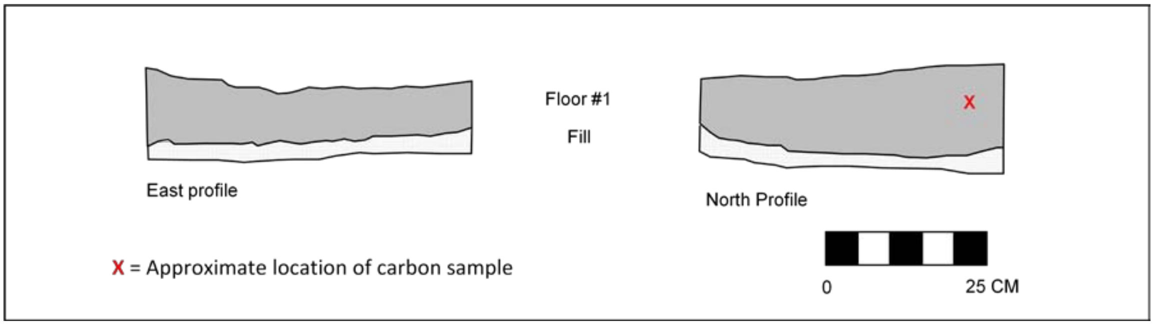


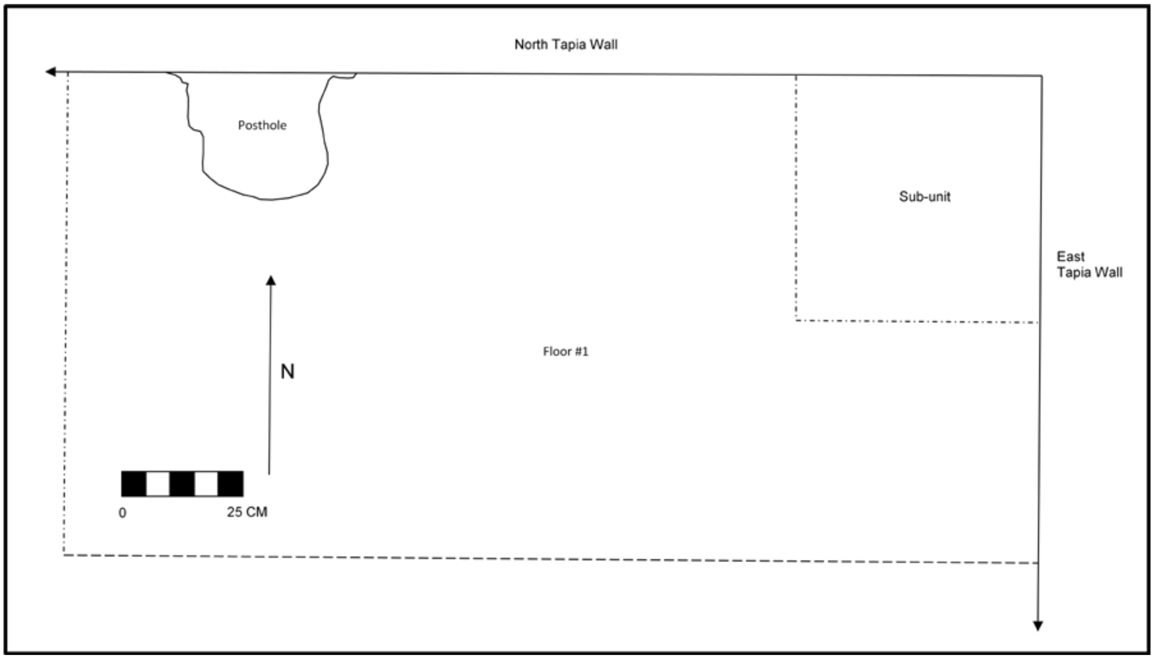
Table 5.2 – Radiocarbon Date Compound II-Unit#1

Sample Number	Unit Number	Excavation Context	Date BP
AA69632	Compound II/Unit 1	Interior of Floor #1	2063±33

Compound II/Unit #2 (location see Figures 5.12)

This unit (1m x 2m) was placed within the northeast corner of room #7 so as to better examine what was tentatively identified as a posthole located against the tapia wall that defines the northern border of room #7 (Figure 5.15). In addition, floor #1, which was not completely covered with sand, appeared to be in relatively sound condition, which also made excavation in this room appealing.

Figure 5.15 – Plan Compound II/U#2



Once all of the surface sand was removed, the posthole could be thoroughly inspected. This feature, somewhat broken within the northern perimeter, extended down into the underlying tapia fill and may have been used to anchor an upright pole. The walls of this feature were relatively straight and no carbon was found within, so the possibility that this hole was used as a hearth seems remote. The sand within was sifted with a fine-mesh screen, but no artifacts, such as spondylus beads were recovered[5]. The remainder of the floor in room #7 was scrutinized for the presence of additional postholes, but none could be identified.

The test unit (50cm x 50cm) was placed in the northeast corner of the unit in part due to a desire to preserve the posthole. The unit was excavated to a depth of about 25cm, and revealed the presence of three hard tapia floors directly bonded to each other (Figure 5.16). Floors # 1 and #3 were of a similar thickness – about 3cm to 5cm, while floor #2 as about 7cm to 10cm in depth. All three of these floors were in

[5] As has been demonstrated by *Proyecto Jatanca/Huaca Colorada*, spondylus beads are typically found within postholes at Je-1023 (Swenson et al. 2008 and 2009).

excellent condition and ran unbroken throughout the unit. Beneath this floor sequence was a hard layer of fill. Samples of carbon were recovered from all three floors. An especially large sample was selected from the interior of floor #3 for radiocarbon processing (Table 5.3). In addition, some badly broken bone fragments were recovered from the interior of floor #3. These were collected and sent to the laboratory in Trujillo for additional ethnobotanical analysis (Vazquez and Tham 2006).

Figure 5.16 – Profile Compound II/Unit #2

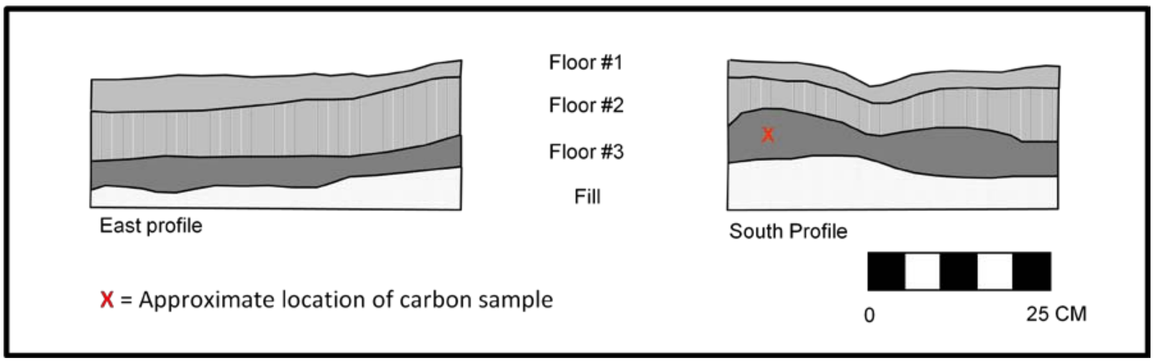


Table 5.3 – Radiocarbon Date from Compound II-Unit #2

Sample Number	Unit Number	Excavation Context	Date BP
AA69633	Compound II/Unit 2	Interior of Floor #3	2219±53

Compound II/Unit #3 (Location see Figure 5.12)

This unit (2m x 1m) was placed within room #4 (Figure 5.17) in an effort to sample one of the rooms that abuts the ramp/platform room (see Chapter 1 and Chapter 6). The northwest corner of the room contained little sand, making it a logical location for the unit itself.

While clearing off the sandy overburden it was noted that floor #1 is in extremely poor condition and is restricted largely to two small patches located in the northeast and northwest portion of the unit. Floor #2 was in better condition, but like floor #1, there were large patches where sections were missing. Within the southern portion of the unit, the surface of floor #2 had an easily-identified, large area that was relatively red and somewhat brittle. This presence of this discolored patch may indicate that during occupation, small controlled fires had been placed within this area. Despite the generally poor condition of the exposed floors, it did not appear as though this unit had ever been looted.

The test unit (50cm x 50cm) was placed against the west wall – about 50 cm from the northwest corner of room #1 in an effort to place at least a portion of floor #2 within the south profile (Figure 5.18). This unit revealed the presence of an additional floor below floor #2. As with floor #1 and floor #2, floor #3 was in generally poor shape as several large cracks ran through them. Indeed, it is possible that much of what was identified as floor #2 and floor #3 are actually a series of patches that were employed to expediently repair damage. Whether a series of patch or a poorly preserved floor sequence, levels of tapia were directly bonded to each other and floor #3 was bonded directly to the fill layer. In addition, an examination of the two small sections of floor #1 indicated that it had been bonded to floor #2. Carbon samples were collected from all three floors, but were discarded due to the general ambiguity of the floor sequence within this unit. No other artifacts were recovered from this unit.

Figure 5.17 – Plan Compound II-Unit#3

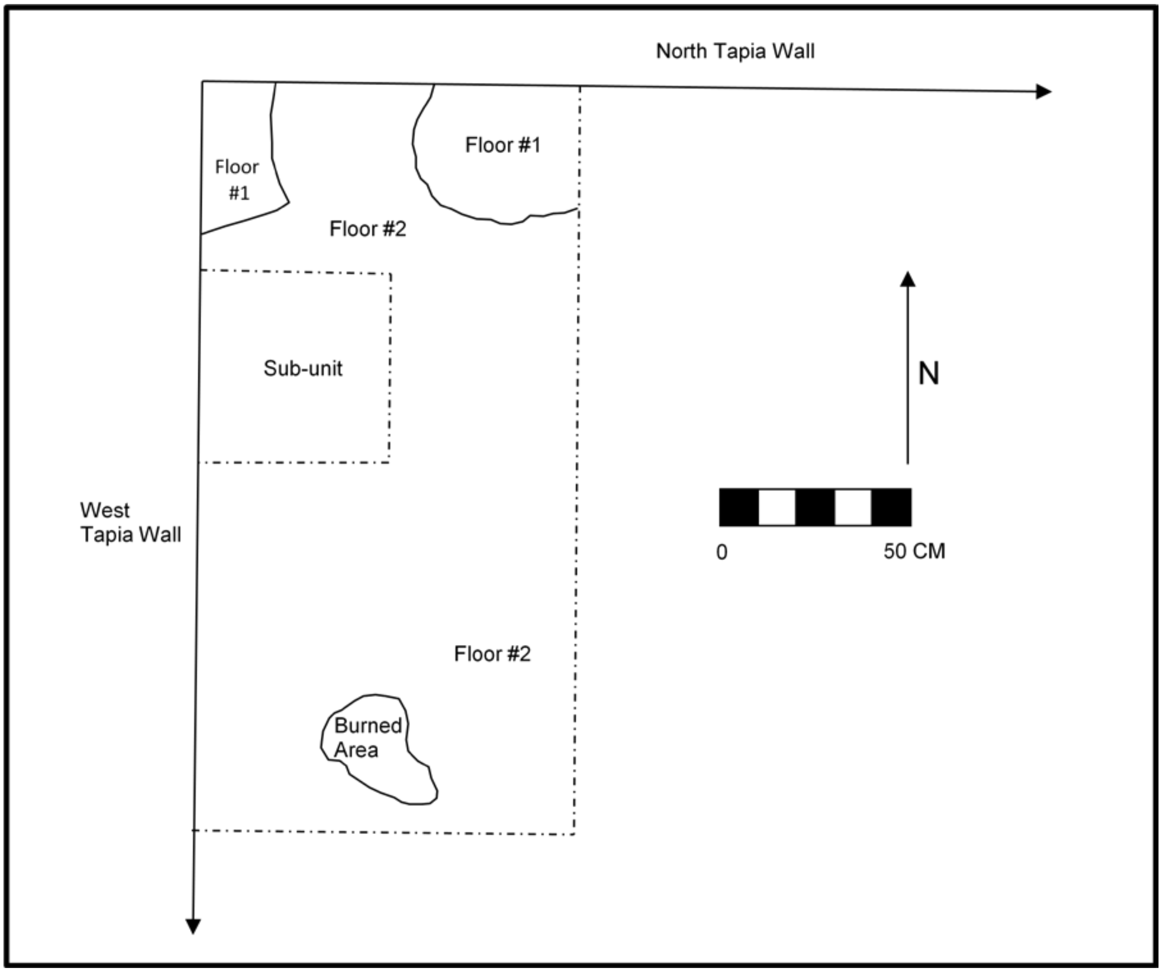
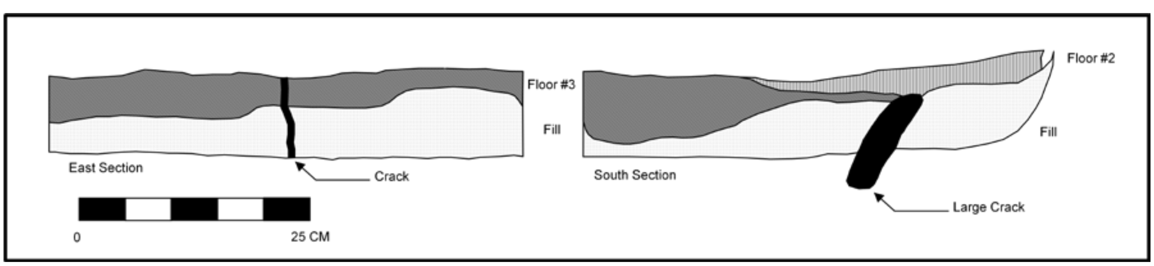


Figure 5.18 – Profile Compound II-Unit #3



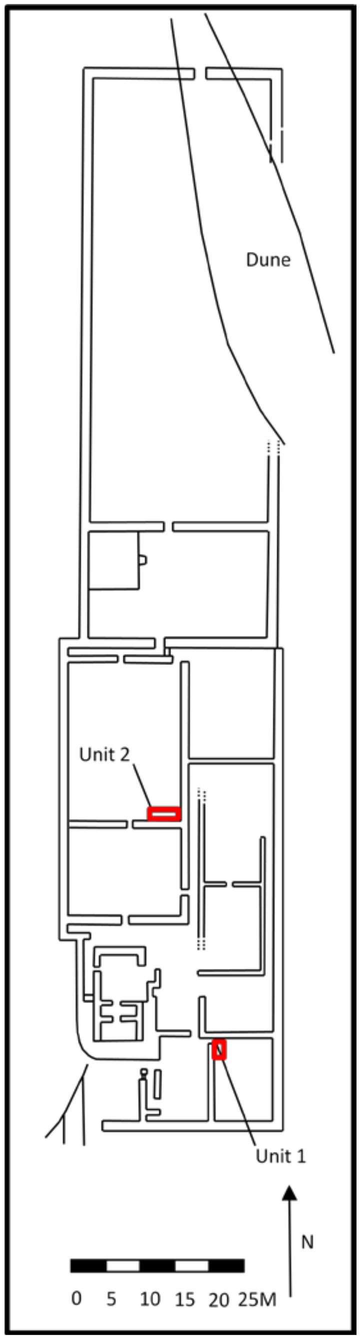
Compound III

Based upon the elongated shape, number of rooms, size, and access patterns (se Chapter 6) the internal layout of Compound III is relatively simple when compared to the other major compounds. As with Compound II, Compound III contains quite a bit of deep sand, restricting the location and number of units, which resulted in the following distribution:

CIII-U1 = relatively large room (ca. 13m x 9m) far from the north entry

CIII-U2 = relatively large room (ca. 25m x 17m) accessed through a baffled entry

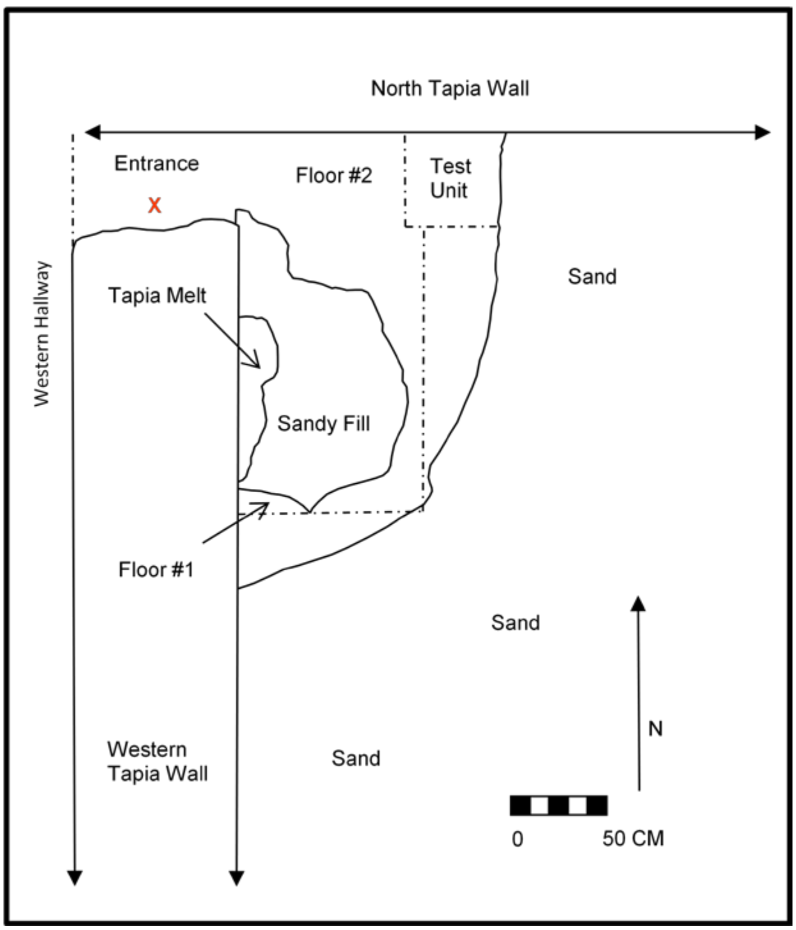
Figure 5.19 - Compound III Unit Locations



Compound III/Unit #1 (Location see Figure 5.19)

This unit was placed against the southeast corner of room #13 for the purpose of sampling the southern sector of the compound and examining a well preserved room entry (Figure 5.20). In addition, this room is located to the immediate east of the elevated portion of the compound. The sand overlying floor #1 was extremely deep (about 1.5m) and large amounts of sand poured into the exposed area from the south, east and the western door from the adjoining hallway. Therefore, part of the hallway was also cleared with the end result being that this unit had an atypical form that was approximately 2m x 2m in area.

Figure 5.20 – Plan Compound III-Unit#1



While removing the sandy overburden, a large *cántaro* was found "floating" within the sand well-above the level of floor #1, clearly placing it within secondary context (Figure 5. 21). Unfortunately, the vessel fell apart during excavation, but was reconstructed in the lab, drawn, and photographed. The nondescript vessel appears to be of a utilitarian nature and may date to the Late Intermediate Period or later (see Swenson 2004; Warner 2006). It should be stressed that this vessel probably made its way into the unit long after Jatanca was abandoned and does not imply any kind of a meaningful Chimú occupation within Compound III. Indeed, this vessel may be evidence of a storage pattern noted by Eling (1987) as historically practiced by the nearby residents of San Lorenzo de Jatanca. According to Eling (1987), at one time local residents buried comestibles in the nearby sand so as to reduce loss due to rodents. Since this vessel was found intact, it may be a relatively recent storage vessel that was left unclaimed.

Figure 5.21 – Chimú Vessel in Situ

The surface of CIII-U#1 was difficult to define as it appeared to have been damaged at some point in the past. In many areas, floor #1 and floor #2 were missing altogether, resulting in the exposure of the sandy fill layer. The entrance, however, was well-preserved as a hard tapia-like substance had been used to construct the uppermost floor, which descended steeply into the room. Once within room #13, the hallway/entry floor overlapped with what appeared to be a preserved portion of room #13's floor #1. In other words, the final floor of this unit was in place before the uppermost level of the hallway/entry floor was constructed. Finally, there was a small lens of hard tapia wall-melt along the length of the west wall.

The test pit (50cm x 50cm) was placed against the southern face of the north wall approximately 1m from the doorway (Figure 5.20). This unit exposed two floors, both of which were made of relatively soft, but compact matrix (Figure 5.22). In general, the floors were thin (between 5cm and 10cm deep) and difficult to define, but appeared to be bonded directly together. However, between floor #2 and the hard tapia fill a thin layer of sterile sand (about 5cm deep) was encountered above a more typical layer of hard fill. An excellent carbon sample was found within floor # 1 and collected along with an additional sample found impressed deeply within the surface of the uppermost floor within the hallway/entry. Both of these underwent radiocarbon analysis (Table 5.4).

Figure 5.22 – Profile Compound III-Unit#1

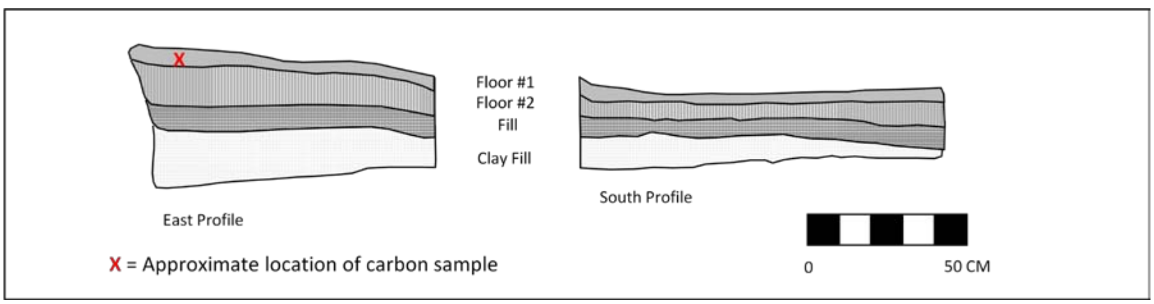


Table 5.4 – Radiocarbon Date Compound III – Unit #1

Sample Number	Unit Number	Excavation Context	Date BP
Beta-216931	Compound III/Unit 1	Interior of Floor #1 hall	2030±40
AA69634	Compound III/Unit 1	Interior of Floor #3	2156±37

Compound III/Unit #2 (For location see Figure 5.19)

This room (room #3) was selected for excavation due in no small part to its size; this was the biggest room in which a unit was placed during the 2004-2005 field season. The excavation unit (1m x 2m) was placed against the north face of a southern wall (Figure 5.23) in what appeared to be relatively shallow sand. This was not the case as floor #1 was well over one-meter below the surface level.

Initial clearing of the sandy overburden revealed that floor #1 was in very poor condition and no longer covered the entire area of the unit; only a few fragments were found within the corner of the room and along the southern wall. A large rock was found resting upon floor #2 along the western edge of the unit, but appeared to be an "accidental" inclusion that entered the unit after abandonment. The eastern wall had a large accumulation of tapia wall melt that had adhered to floor #2. A large portion of a stone bowl was removed from the tapia wall that defines the southern portion of this unit (Figure 5.24). This bowl had a diameter of about 16cm and a smooth exterior and interior[6].

[6] Dillehay has found similar bowls at Huaca Prieta within Cupisnique context (Personal communication 2010)

Figure 5.23 – Plan Compound III-Unit#2

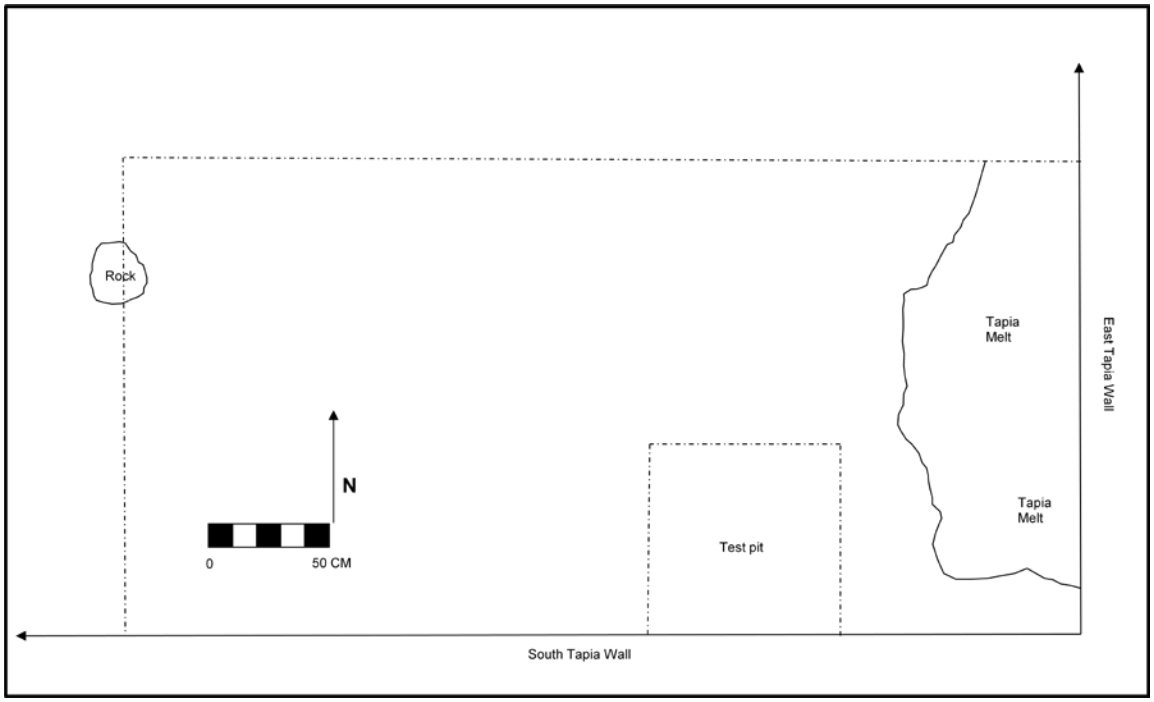
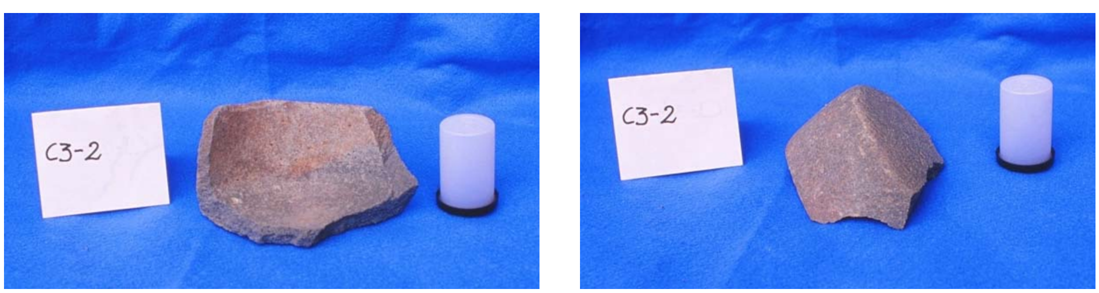
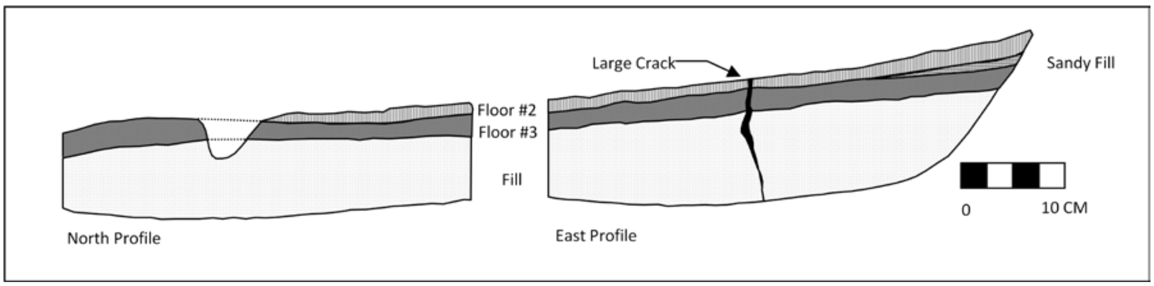


Figure 5.24 – Stone Bowl Fragment – Interior and Exterior



Due to the presence of the wall melt, the test unit was placed along the southern wall. The unit was staked out at 50cm x 50cm and once excavated, revealed the presence of two thin, superimposed floors – floor #2 and floor #3 – in addition to the fragments of floor #1 (Figure 5.23). Floor #1 was about 3cm thick and is composed of a relatively soft matrix. Floor #2 (about 1cm–2cm thick) and floor #3 (about 2cm-3cm thick) were bonded directly together and were made of hardened tapia, making them far more durable and better-preserved than floor #1 (Figure 5,25). The unit was excavated to a depth of about 25 centimeters and terminated once sterile fill was encountered. The test unit provided examples of bone, lithic and shell, which were collected for later analysis.

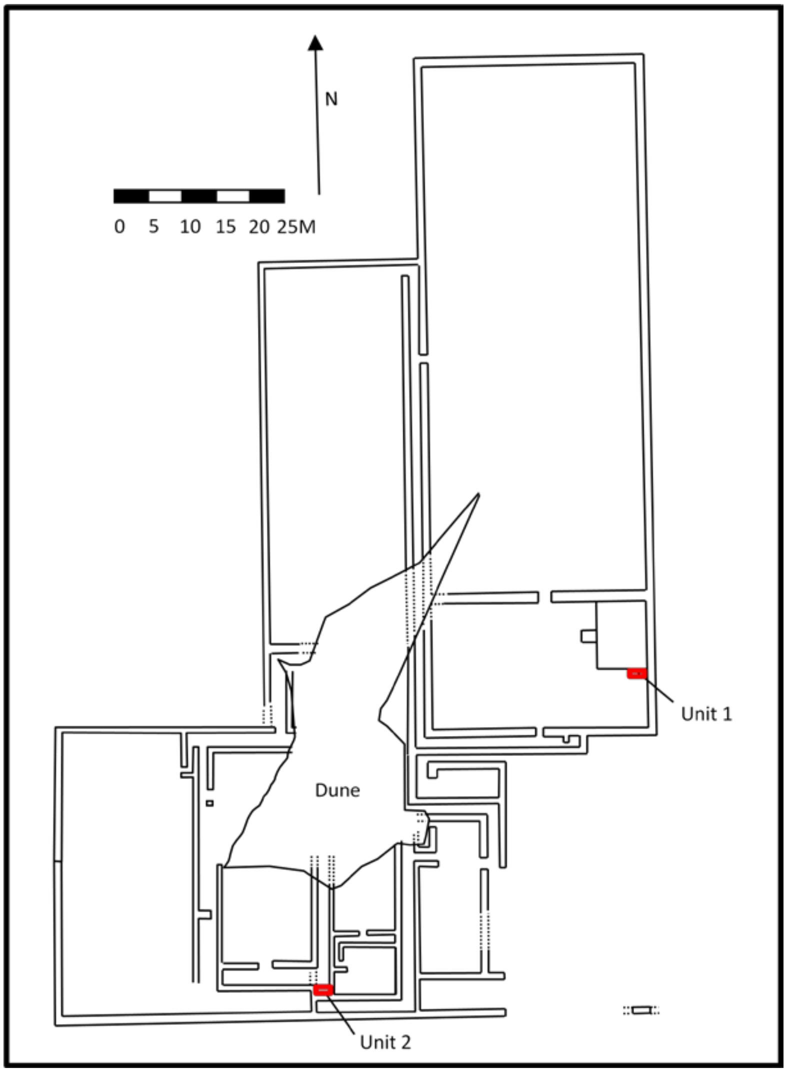
Figure 5.25 – Profile Compound III-Unit #2



Compound IV

Vast sections of Compound IV (Figure 5.26) were covered with sand during 2005. Indeed, the presence of a large stationary dune within the center of the compound hindered mapping (See Chapter 3) and the placement of test units. In addition, since time was beginning to run short, it was decided that Compound IV would be excavated in only two areas. In addition to being relatively free of sand, these locations were chosen for reasons of comparison and architectural uniqueness.

Figure 5.26 - Compound IV Unit Locations



CIII-U1 = large room (ca.30m x 18m) with platform that could be compared with CI-U#2

CIII-U2 = small (ca. 2m width) architectural feature (dead end hallway) not tested

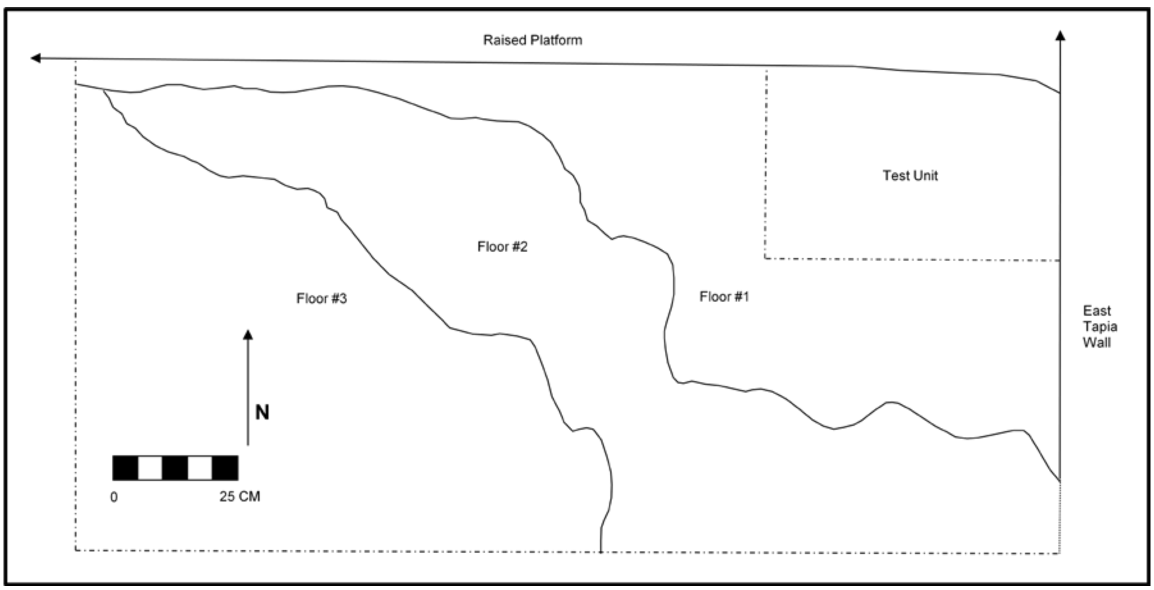
Compound IV/Unit #1 (For location see Figure 5.26)

This unit (1m x 2m) was placed adjacent to the southern side of the eastern platform within room #2 of Compound IV (Figure 5.27) in an effort to compare the platform construction sequence in this compound with that in Compound I (Figure 5.6).

It was hypothesized that rooms containing ramp/platform features were used for political and ceremonial purposes (see Chapters 6-8) the frequency of which might necessitate frequent floor refurbishment. Therefore, this unit (along with CI-U#2) was an opportunity to test at least a portion of this hypothesis.

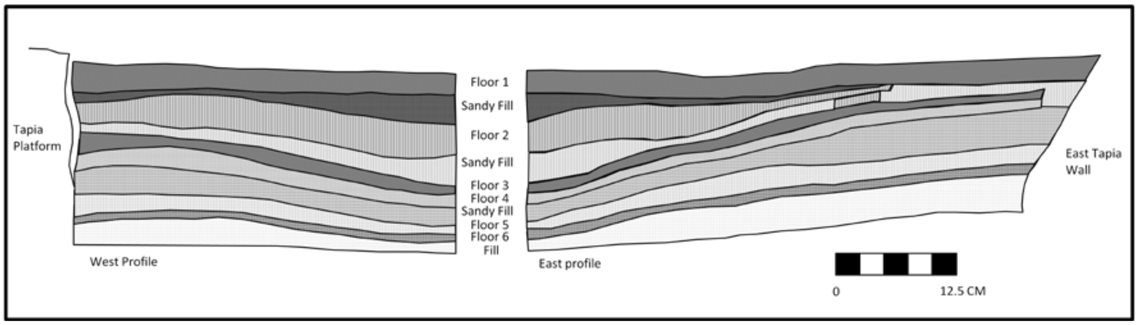
A thin layer of clean sand covered this unit and when removed, a poorly preserved floor was revealed. A large section of floor #1 was missing, which essentially divided the floor into two-halves within the test unit. Within this large void, floor #2 could be seen. This floor section was also poorly-preserved.

Figure 5.27 – Plan Compound IV-Unit#1



In an effort to include floor #1 within the profile drawing, the sub--unit (approximately 50cm x 50cm) was placed within the northeast corner created by the junction of the east platform with the east tapia wall. Once excavated, the subunit revealed a complex series of poorly preserved floors (especially floors #1 and #2) some of which were bonded directly together, while others were separated by a thin mixture of sand and small, angular bits of gravel (Figure 5.28). In general, the floors were made of a material that appeared to be a bit “whiter” in color and finer in texture than that typically used for constructing floors within Jatanca. The surface of floor #6 has a relatively round (d=14cm), discolored area that may indicate the presence of a small controlled fire having been placed within this area. The unit was excavated to a depth of about 25cm at which point the fill used to construct the east platform was encountered.

Figure 5.28 – Profile Compound IV-Unit#1

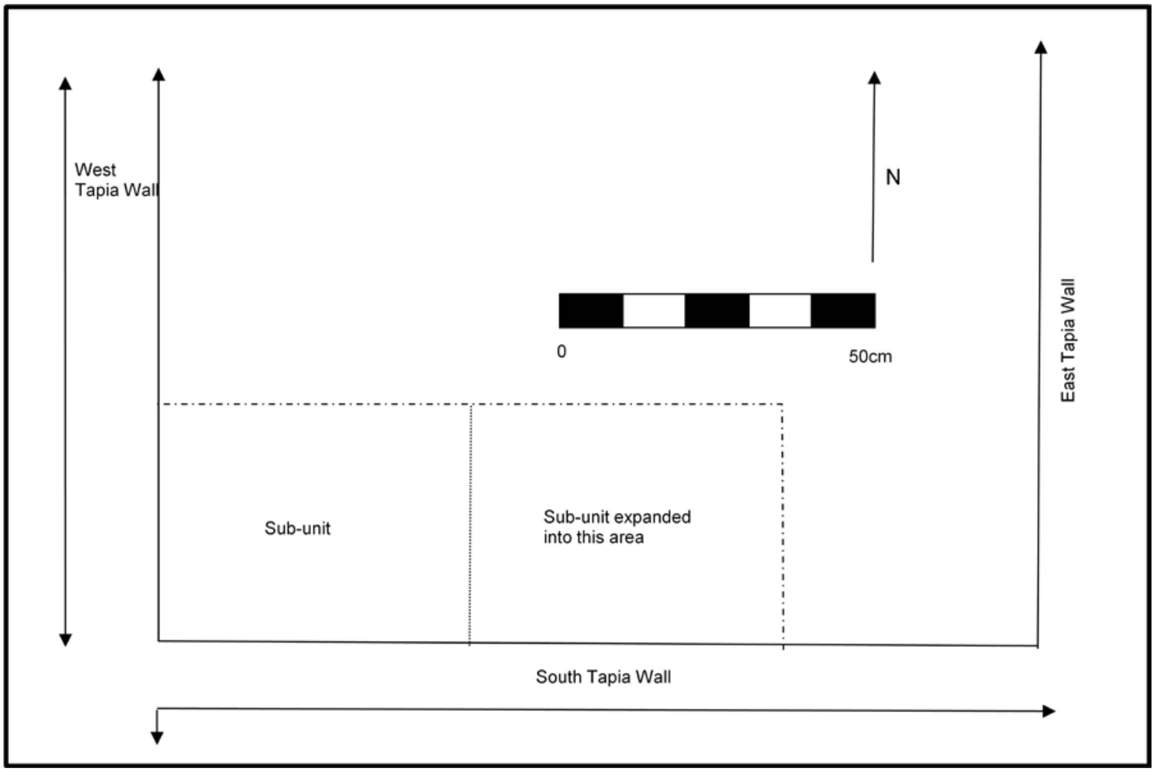


Compound IV/Unit#2 (For location see Figure 5.26)

This unit was located at the end of a dead-end hallway within the southern portion of the compound. Dead-end hallways were used with regularity in all of the compounds and the preservation of this example provided a good opportunity to examine the floor sequence and the possibility that they were used as an area for storage.

The test unit was placed within the southwest corner of the unit (Figure 5.29). The overburden was removed and a well-preserved floor #1 was exposed. No artifacts or features that might indicate the function of this architectural trope were found in association with this floor.

Figure 5.29 – Plan Compound IV-Unit #2



The sub-unit was placed within the southwestern corner of the unit and was originally staked out at 50cm x 50cm. As the depth of this unit increased, however, the area of the unit also had to be expanded to 1m x .5m in order to clarify the initial floor sequence and provide room sufficient to extend the 50cm x 50cm unit down into sterile soil – about 80cm in depth. This test unit exposed a complex sequence of floors and fill (Figure 5.30). Floor #1 was especially well-preserved and was between 5cm and 10cm thick. Beneath this initial floor are four alternating layers of fine sand and a composite layer made up of sand/tapia/small gravel. Floor #2 was also well-preserved, about 10cm thick and is situated above a layer of very fine sand. It is of interest to note that part of this floor is directly bonded to a layer of fine, chalk-like material similar to that encountered in the test unit for Compound IV/Unit #1 (see above). Another piece of the chalk-like material is "floating" vertically within the sandy fill of the unit, parallel to the western tapia wall. Beneath this are four superimposed floors made out of hard tapia. While a thick layer of sand does separate floor #1 from those below, based upon the presence of the “floating” floor section and other pieces of debris within the sand, it seems that this area was intentionally filled in order to significantly raise the height of the upper-most floor and not as a result of any kind of abandonment and subsequent reoccupation as was the case at the nearby early Moche site of Dos Cabesas (see Donnan and Cock 1997).

Carbon was collected from most of the various floor/fill layers of this unit. Ultimately, one carbon sample removed from the center of floor #1 (Table 5.5) was selected from this unit for radiocarbon processing (see discussion below).

Figure 5.30 – Compound IV/Unit #2

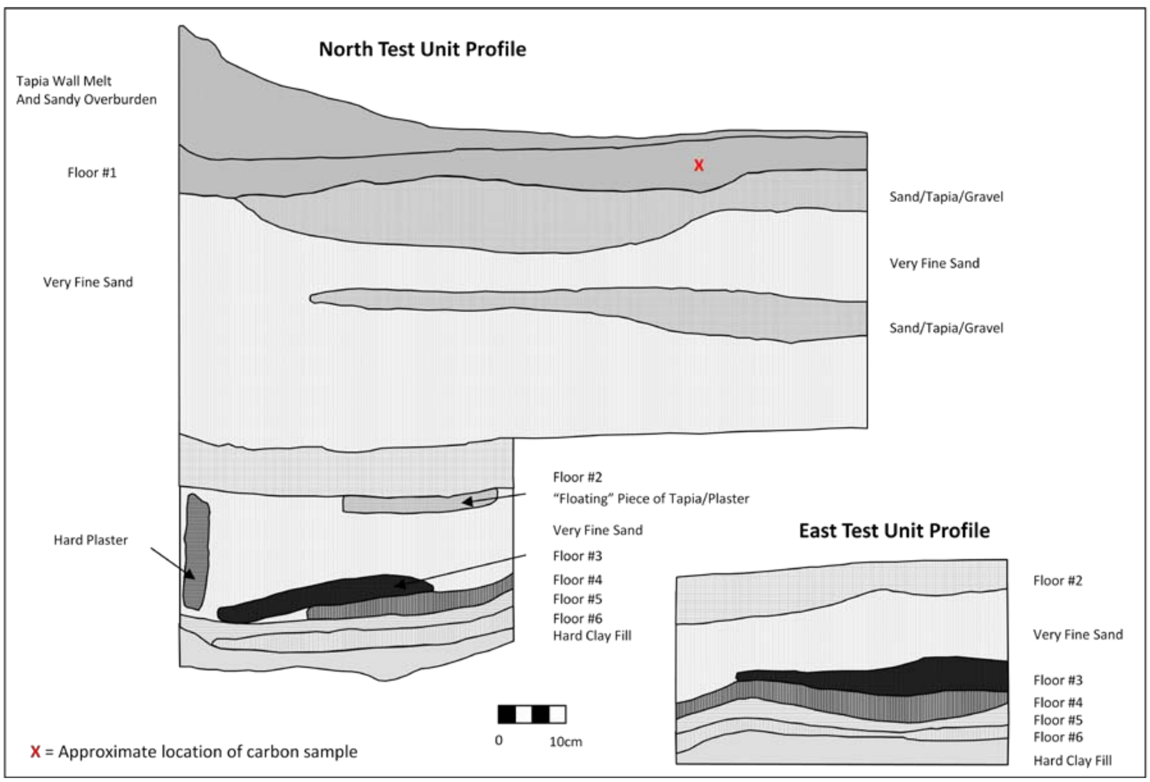


Table 5.5 – Radiocarbon Date from CIV-U#2/Interior of Floor #1

Sample Number	Unit Number	Excavation Context	Date BP
AA69635	Compound IV/Unit 2	Interior of Floor #1	2092±37

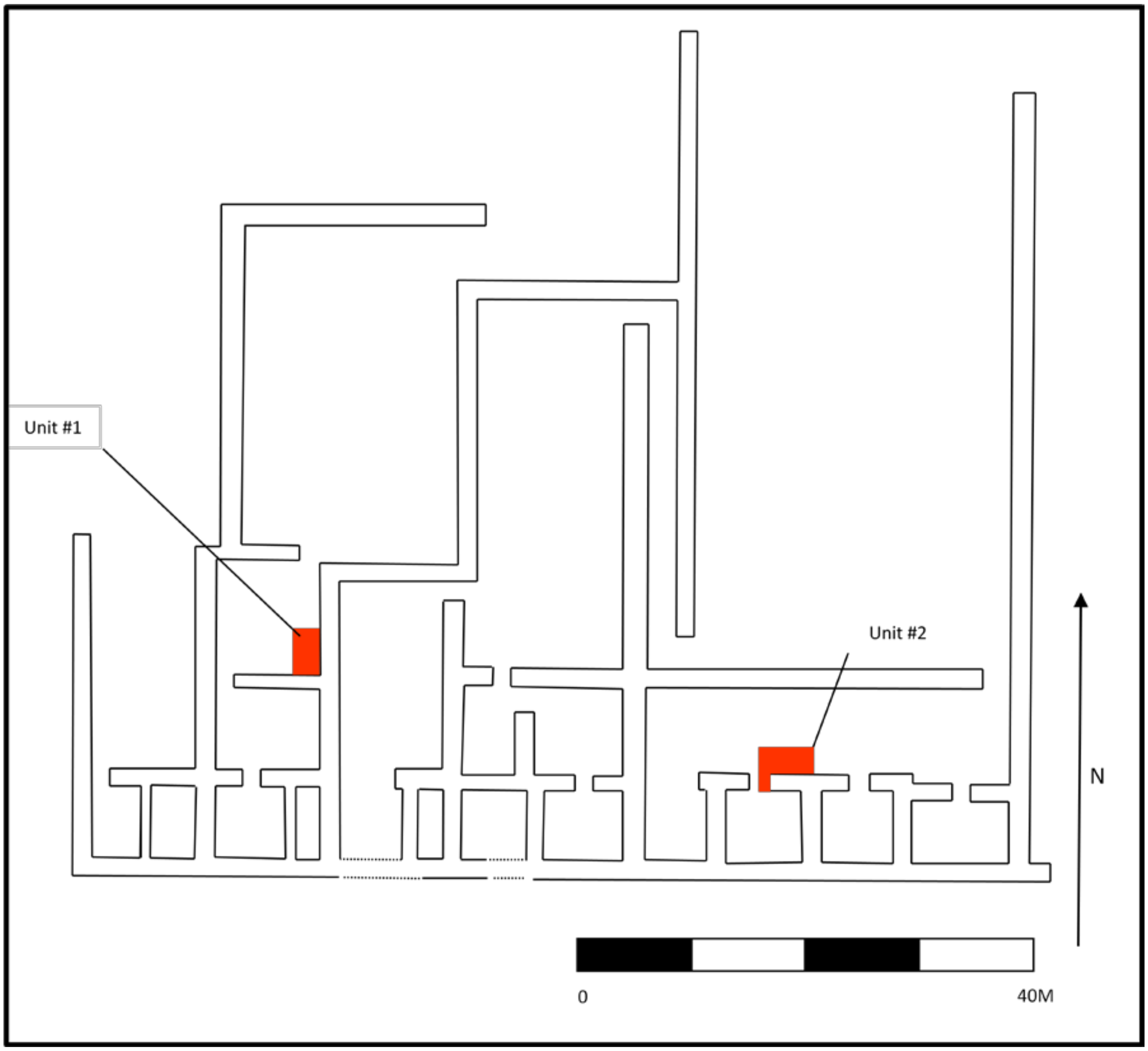
Compound VI

This Compound (Figure 5.31) is the smallest of the compounds and has a unique shape when compared to the others (see Chapters 1 and 6). In addition, this compound is located a bit outside of the architectural core made up of Compounds I-V, Compound VII, and the Acropolis. Two units were placed within this compound, both of which were in the south as the north was heavily deflated.

CVI-U1 = small room (ca. 5m x 5m) located in front of small south rooms

CVI-U2 = small room (ca. 4m x 16m) test for the presence of a ramp/stair feature

Figure 5.31 - Compound VI Unit Locations

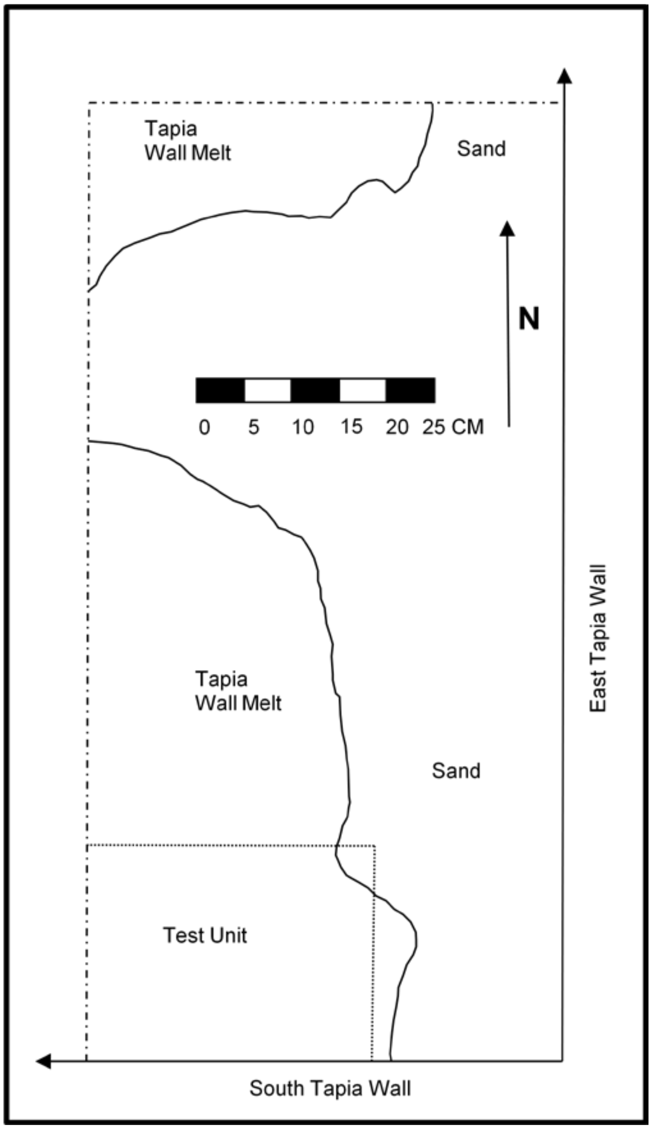


Compound VI/Unit #1 (For location see Figure 5.31)

This unit was located in the southeastern corner of room #16 (Figure 5.32), which is one of the linking rooms between the small southern "bin-shaped" rooms and the north entrance. In addition, this room was selected for excavation as it was in the western portion of the compound.

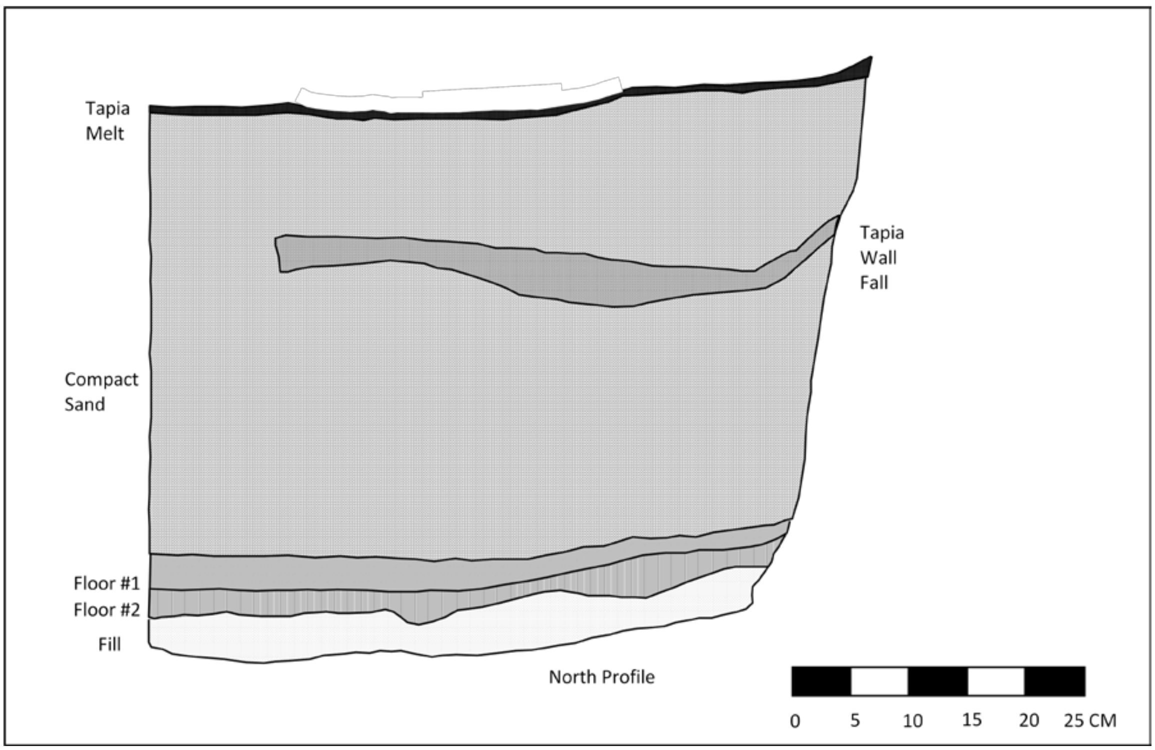
The unit was staked out at 1m x 2m and abutted the southeastern corner of the room (Figure 5.32). The surface level of the unit was composed of a combination of a thin layer of melted tapia and compacted sand. There was no evidence that this unit had ever been looted. Once excavation began, it became clear that there was an inordinate amount of wall-fall beneath the surface of the unit. Therefore, the sub-unit was placed away from the east wall in an effort to obtain at least one clean profile.

Figure 5.32 – Plan Compound VI-Unit #1



After removing the thin layer of tapia melt, a deep layer of compact sand partially bifurcated by a dense lens of tapia wall-fall approximately 5cm thick was encountered within the sub-unit (Figure 5.33). Floor #1 was located approximately 50cm from the surface level. This floor was relatively thin (approximately 2cm-4cm thick), yet proved to be in excellent condition. Directly bonded to floor #1 was floor #2 which was also 2cm-4cm in thickness and in an excellent state of preservation. Beneath this, floor #2 was bonded directly to a layer of hard sterile fill. No features or artifacts were encountered either on top of or within either floor. Unfortunately, due to the excessive amount of wall fall associated with this unit, it was not possible to draw two profiles for this sub-unit.

Figure 5.33 – Profile Compound VI-Unit #1



Compound VI/Unit #2 (For location see Figure 5.31)

This irregularly shaped unit (about 1m x 2m) was located in the southern sector of room #2 (Figure 5.34). Due to a perceived difference in elevation between room #2 and the replicated rooms along the southern edge of Compound VI, the unit was expanded into the entry of room #5 in order to test for the presence of either a ramp or step. Excavation down to floor #1 within the entry did not reveal the presence of either feature. Indeed, the difference in elevation between room #2 and room #5 was an illusion created by the differential height of surface debris. Finally, unlike CVI-U#1, there was very little wall fall within this room.

The test unit was placed against the north face of the southern wall in an effort to examine the floor sequence of room #2. During excavation, two tapia floors were encountered (Figure 5.35). Floor #1 was about 3-4cm thick and has quite a bit of sand mixed throughout. A few minute pieces of non-diagnostic ceramics were present in this floor. Floor #2 was also very hard, but somewhat brittle as well. Large amounts of carbon were recovered from floor #1, with only trace amounts being found within floor #2. Finally, floor #2 was bonded directly to the below fill.

Figure 5.34 – Plan Compound VI-Unit #2

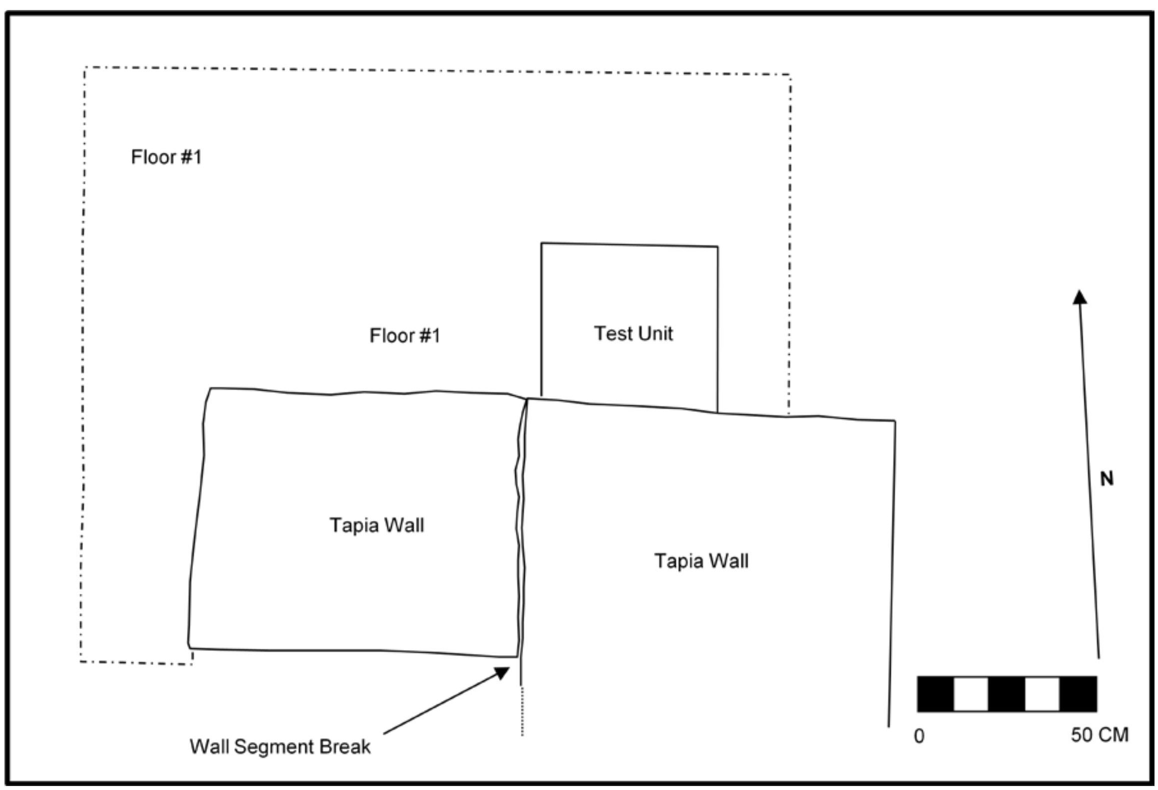
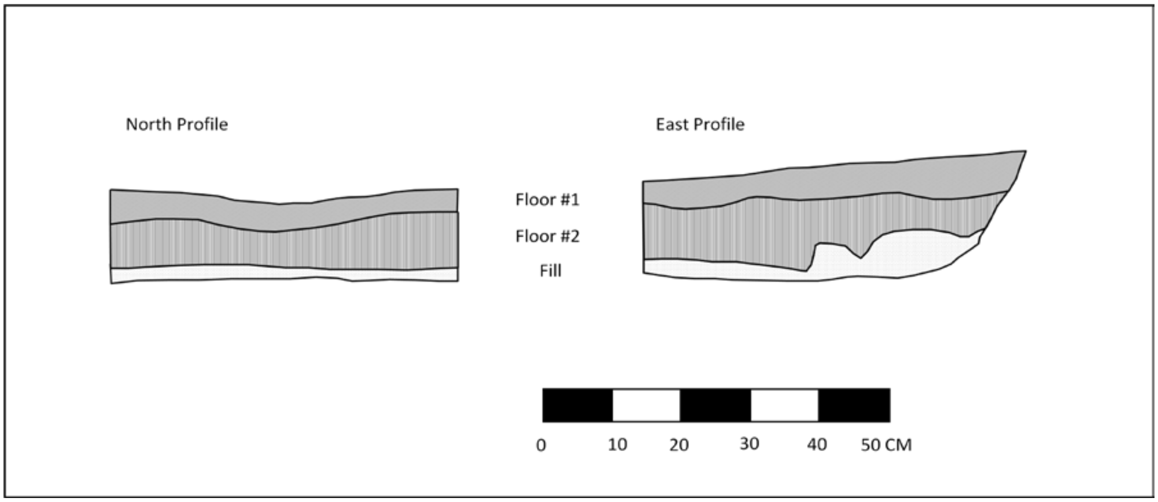


Figure 5.35 – Profile Compound VI-Unit #2

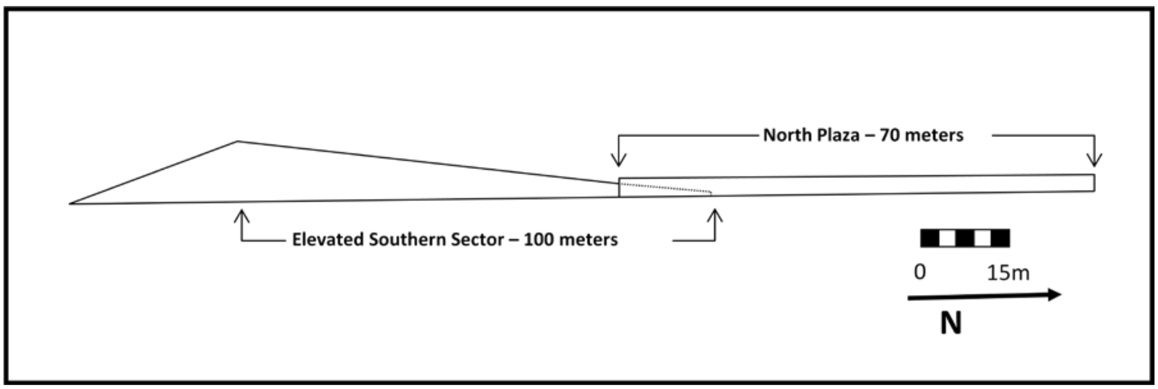


The Acropolis Unit Locations

When examined from a profile view, the Acropolis can be broken down into two major components: the north plaza and the elevated southern sector. This elevated sector makes the Acropolis unique as it is the only Je-1023 compound that has such a dramatic change in elevation (Dillehay and Kolata 2004); all of the other compounds were constructed on the relatively flat pampa (see Chapter 1 and Chapter 6 for detailed discussion). The entire southern half of the Acropolis rise at about a 5° grade until it reaches approximately 8m above the surrounding desert floor, while the large northern plaza is built upon the flat desert surface (Figures 5.36 and 5.37). Due to its uniqueness, the Acropolis was the location of quite a bit of excavation activity. Unfortunately, it has also been badly looted – especially within the elevated sector, which has resulted in the destruction of many subtle architectural features such as interior walls and floors. This is especially true on the summit, which is pockmarked with deep craters and covered in the backdirt of countless illicit units, making it impossible to visually reconstruct the architecture of this zone.

Figure 5.36 – Acropolis Looking West

Figure 5.37 – Schematic of Acropolis Looking West



Therefore, rather than spend time trying to identify undisturbed areas, it was decided that already-existing *huaquero* pits would be cleaned out, squared off, collected, and drawn. Generally, huaquero holes were placed within areas that were considered to be desirable to sample. The use of already-existing *huaquero* holes also reduced the amount of excavation needed to reach sterile soil, and minimized additional "destruction" to the surface of this important feature before it could be mapped with a total station. Since a major goal of the project was to recover carbon from architectural context, the *huaquero* holes could be expediently examined in order to determine the viability of recovering samples of adequate size and architectural association. Also, the use of preexisting huaquero holes allowed this project to examine larger units than would have otherwise been able due to time and money issues.

Finally, all looter pits used in this phase of excavation were backfilled, which resulted in a bit more “order” with regard to the surface of the southern sector.

A total of four units were cleaned within the Acropolis: three were located in the southern sector and one was located within the north plaza (Figure 5.38). The units within the southern sector were concentrated near the south, or “summit” of the Acropolis, while the northern unit was located within a small room “carved out” of the north plaza. Besides accessibility, these units were chosen for additional reasons:

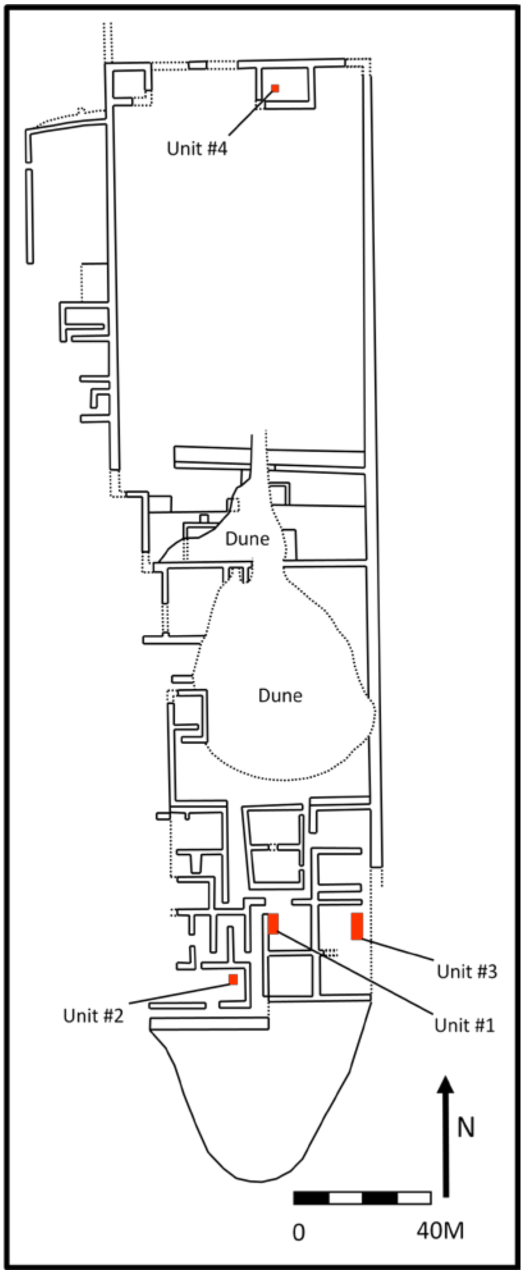
LP#1 – Small room (ca. 6m x 5m) - excellent visible stratigraphy

LP#2 – Medium sized room (ca. 4m x at least 16m) large visible carbon samples

LP#3 – Apparently small room (ca.6m x at least 8m) visible carbon in excellent context

LP#4 – Small room (ca. 6m x 5m) excellent floor data

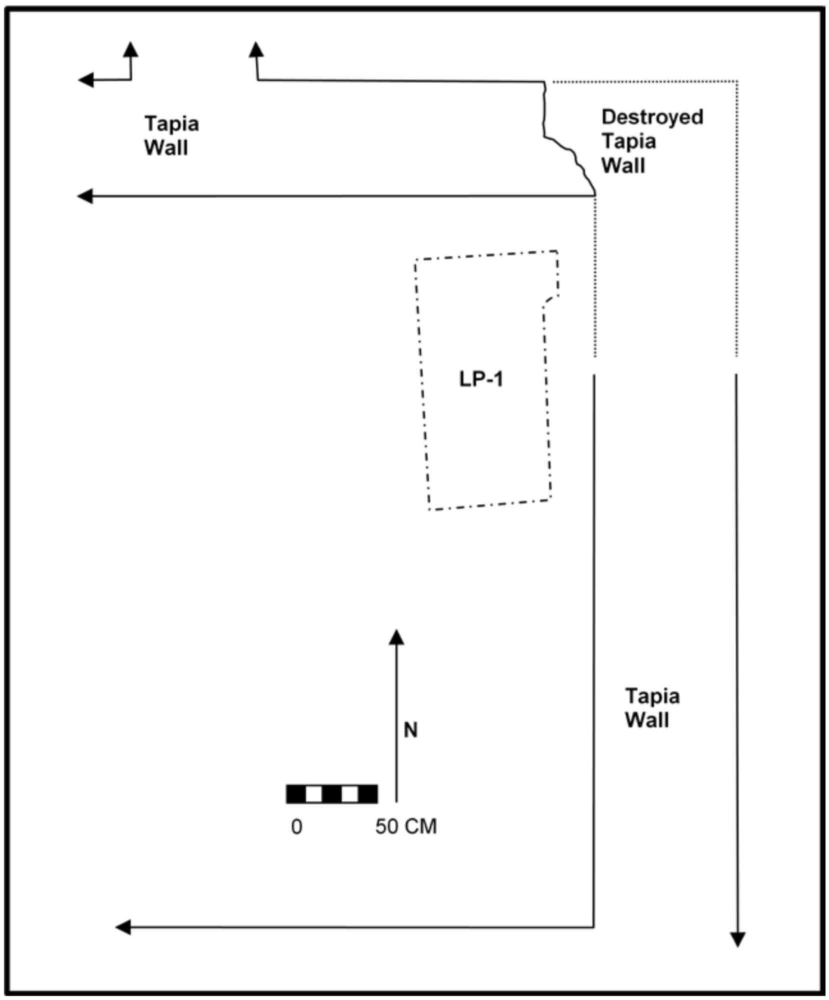
Figure 5.38 - Acropolis Unit Locations



Acropolis/LP #1 (For location see Figure 5.38)

This unit was placed within a relatively rectilinear hole located in the northeast corner of room #21 (Figure 5.39). This hole was assumed to have been a looter's pit, but given its location within a relatively intact area and its rectilinear shape, it is also possible that this was an archaeological unit that was never back-filled.

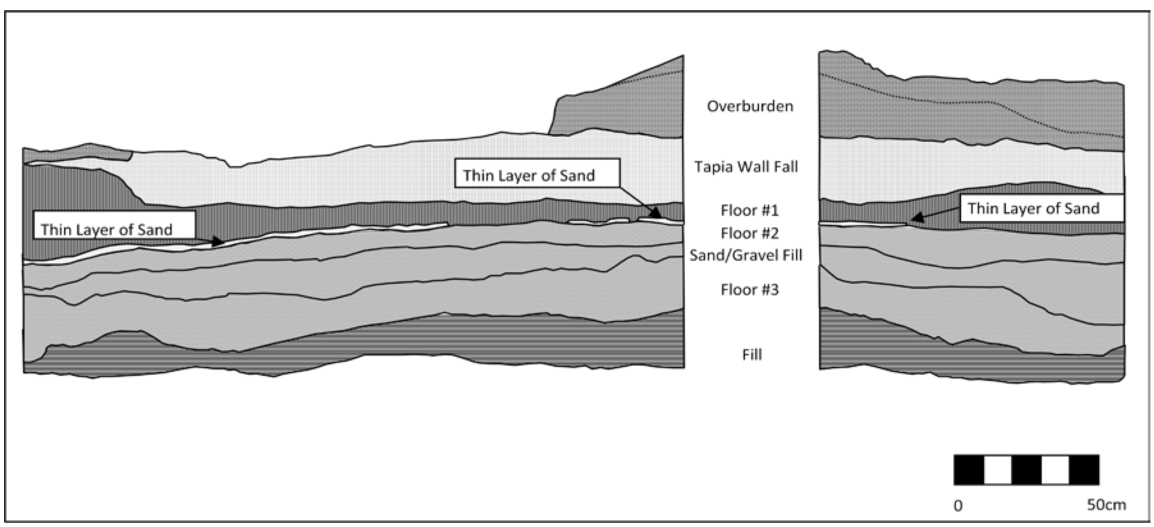
Figure 5.39 – Plan LP-#1



After cleaning the four profiles of this pit and removing excess matrix down to a level of about 70cm below the surface of the unit, an alternating series of three floors and two layers of intervening fill were identified (Figure 5.40). The floors in this room were generally well-preserved, but showed signs of possible surface wear (especially floor #1 and floor #3). Perhaps as a result, these floors vary considerably in thickness. The fill levels are composed of either sand (fill level #1), or a mixture of sand/fine gravel/angular bits of tapia (fill level #2). Beneath floor #3 is a layer of fill that consists of pure, compacted sand.

Diagnostic ceramics of various types (bowls, *tinajas*, and *cantaros*) were scattered on the surface of the area immediately surrounding the unit, and within the loose matrix excavated from inside the pit (see Chapter 4). Many of these ceramics are covered in soot, indicating that they were possibly used for cooking. Two sherds were found within primary context; one was found within Floor #1 and the other was located within the fill layer separating floor #1 and floor #2. It should be noted that numerous examples of these ceramic type are encountered on the surface throughout Jatanca (see Chapter 4). Large samples of carbon were recovered from all of the floors, but no shell, lithic, or faunal material was recovered.

Figure 5.40 – Profile LP-#1



Acropolis/LP #2 (For location see Figure 5.38)

This looter's pit is located within room #22 and had two "hard" borders in the form of the north and west wall (Figure 5.42). The south and east side of this unit was semi-circular shaped and composed of loose extremely sand that was primarily backdirt from both this *huaquero* hole and others within the immediate vicinity. An attempt was made to remove this loose material and better-define the parameters of the pit, but this activity had to be abandoned due to the wholesale destruction of the entire floor within most of this room (Figure 5.41).

Figure 5.41 – LP-#2– Looking Northwest

.

Numerous broken ceramics (*ollas*, bowls, and *cantaros*) were found around the surrounding area of this unit that date to the Late Formative Period (see Chapter 4). Once all of the loose overburden had been removed down to the level of the pure sand-fill that underlies all units on the Acropolis, two architectural profiles were visible that provided information related to both the looting activity and construction sequence associated with this room. Figure 5.43 is a sketch of the open unit which shows that the looters undercut the west tapia wall in an effort to locate burials. While it cannot be stated with complete certainty, based upon a general lack of human bone within and around this unit, it seems unlikely that any were encountered. This unit also showed that a footer was not used in the construction of the west tapia wall. Instead, the wall rests upon a series of floors that in turn were placed directly upon the soft sandy fill that makes up the core of the acropolis.

An examination of the profile (Figure 5.44) also revealed a number of interesting things. Within the northern wall, there appeared to be either a ramp or a platform directly bonded to a lower floor. The northern wall had no footer and was evidently placed directly on top of the feature and floor at a later date. Further complicating any interpretations of this sequence are the presence numerous horizontal lines running through the north profile that are probably the result of different pouring episodes during construction that created a complex horizontal stratigraphy of parallel bands. In other words, it is also possible that level #1 is nothing more than tapia of a radically different color/consistency than that which surrounds it. At any rate, level #1 was constructed of tapia that was 20cm thick at the western end and tapers to a point at the east end of the unit – ultimately "disappearing" into Floor #2 about 85cm from its western point of origin. Floor #2 (3-4cm thick) is directly bonded to the above feature and underlies both the western and northern walls that help define the boundaries of room #22. Therefore, both walls were added after floor #2 was constructed. Beneath floor #2 is a layer of very clean sand with some minor carbon inclusions. Within floor/ramp #1 and floor #2, however, numerous, large carbon inclusions were located and collected with one from the interior of floor #2 used for radiocarbon dating (Table 5.6).

Figure 5.42 – Plan LP-#2

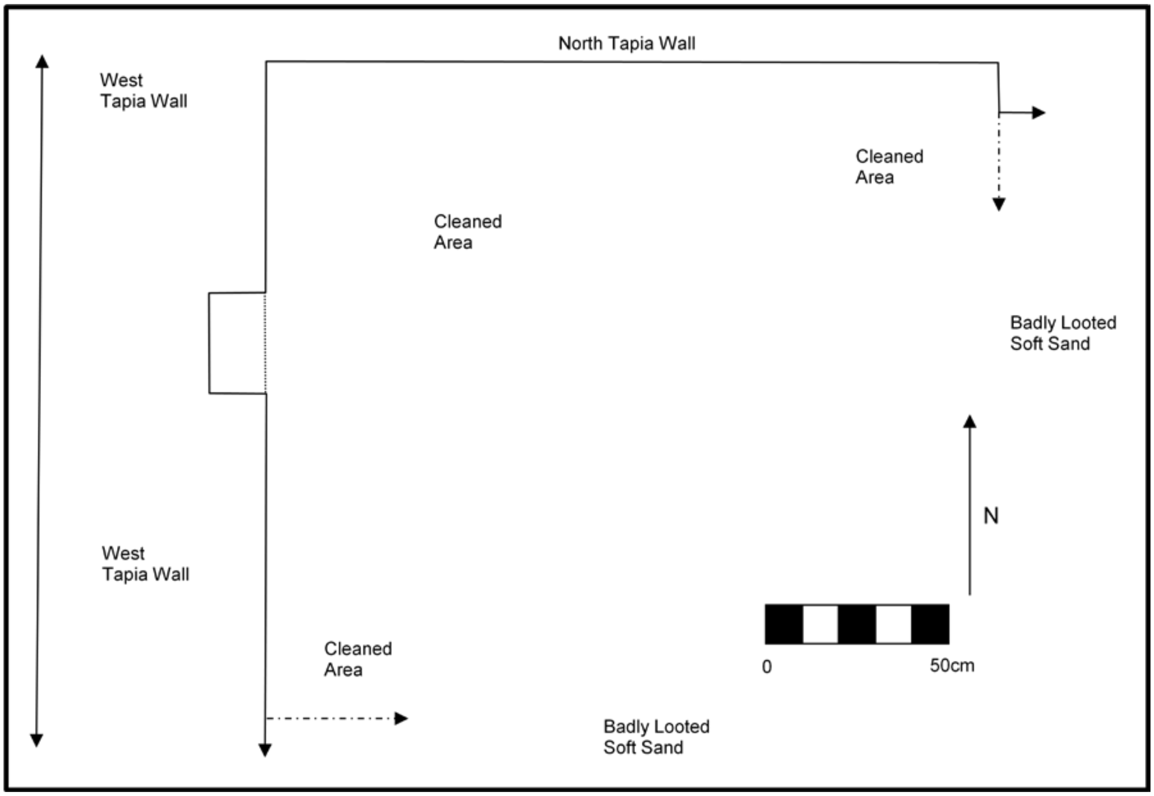


Figure 5.43 – LP-#3 - Sketch of open unit (not to scale)

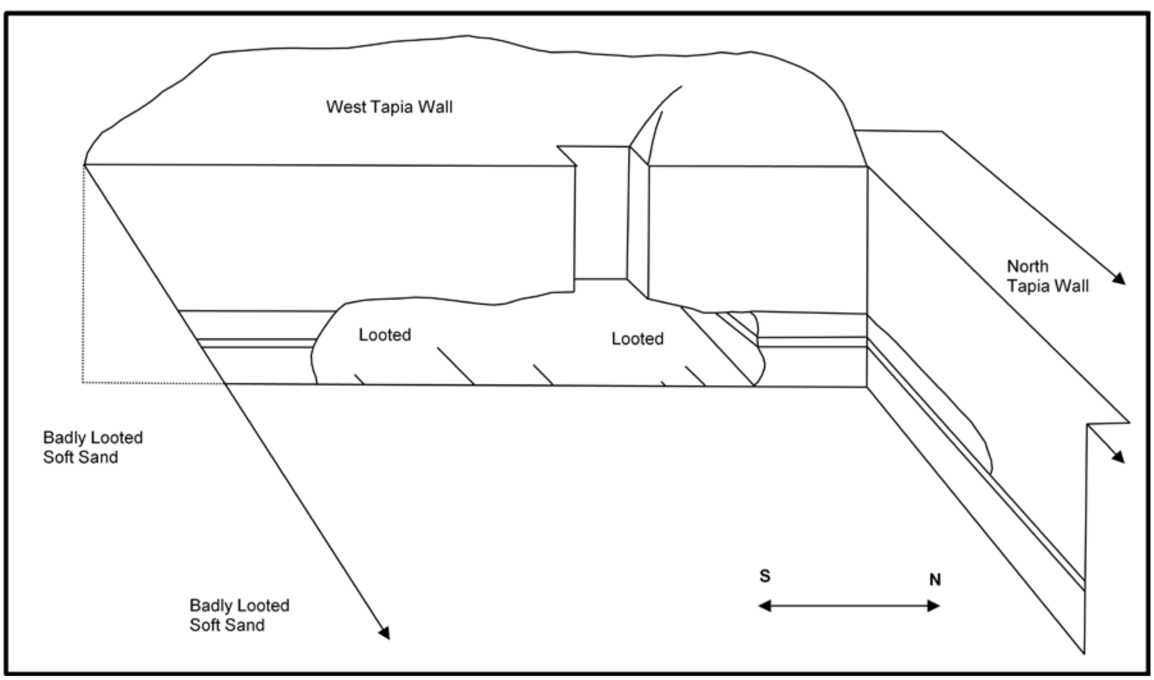


Figure 5.44 – Profile for LP-#3

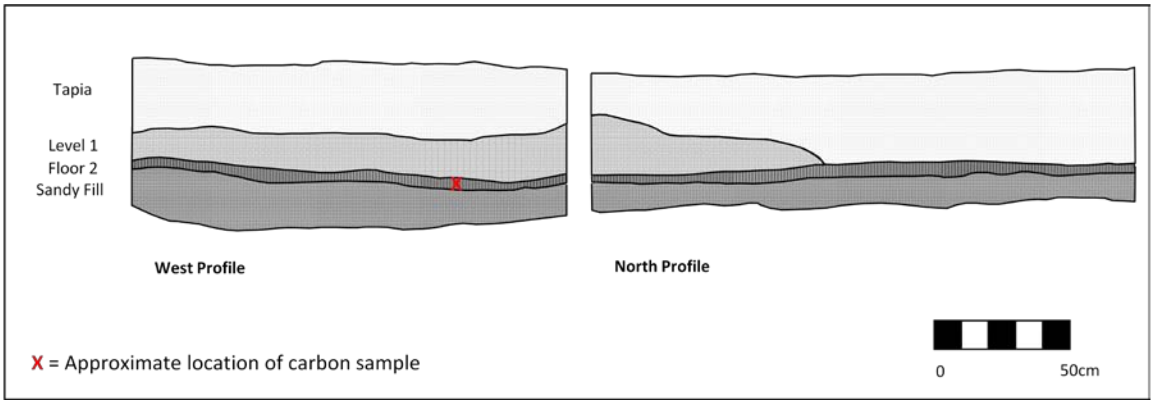


Table 5.6 – Radiocarbon Date from LP-#2

Sample Number	Unit Number	Excavation Context	Date BP
AA69637	Acropolis LP-2	Floor #2	2470±39

Acropolis/LP #3 (For location see Figure 5.38)

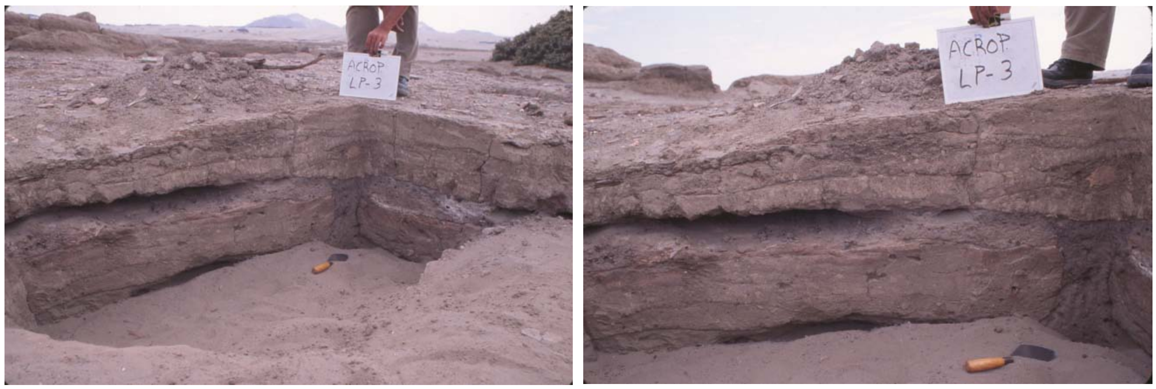
Unfortunately, the entire eastern side of the elevated portion of the Acropolis is in very poor condition due to both natural erosion, and looting activity[7]. Nonetheless, the selection of this *huaquero* hole within room #25 on the eastern face of the Acropolis for cleaning was fortuitous as it provided abundant information related to the chronology, construction, and ceramics of Jatanca.

Numerous Formative Period ceramics were recovered from the surface of this unit (see Chapter 4). Beneath the abundant overburden, there were two thick floors and an intervening layer composed primarily of sand, ash, and carbon. All three levels sat on top of relatively clean, sandy fill such as that typically found within the other looted units within the southern sector of the Acropolis (Figure 5.38). In order to better-understand the construction sequence, the west and north edge of the hole were

[7] Due to the poor condition of this side of the Acropolis and amorphous form of the unit prior to cleaning, it was not possible to draw a meaningful architectural plan of the looter's hole.

cut back until they met at a 90° angle. At the juncture of the two profiles was either the edge of a deep hearth, or a posthole within which fine burned ash had been placed (Figure 5.45).

Figure 5.45 – LP-#3 Looking Northwest and West



Floor #1 (35cm to 10cm thick) was continuous and capped off the feature located within the corner of the unit. It was made of compacted tapia that contained several distinct horizontal bands which might indicate the incomplete mixture of tapia during the time the floors were formed. A consistent color/texture changed was noted running horizontally though the approximate mid-line of the floor (see Figure 5.45). Despite close inspection, it could not be unequivocally determined if the color/texture change represents an actual living/use surface, or if it was the result of a subtle, consistent change in the material that was used in forming this floor.

Beneath floor #1 was a thick layer of fine sand (see also Dillehay and Kolata 2004) heavily mixed with ash and pieces of carbon ranging in size from minute, to large chunks weighing several grams. What was of special interest is that the ashy, carbon-filled material within the possible posthole was a different color and texture than that within the fill level (see Figures 5.45 and 5.46). This burned material continued down through the floor below (floor #2) forming a carbon-filled "column" that ultimately extended into, and was contained by the pure sand fill that forms the core of the Acropolis. The formation processes responsible for this set of features remains unclear.

Floor #2 was thick (about 20cm), made of tapia, and did not extend along the entire length of the west or north profile due to the presence of the "posthole." This floor was composed of multiple layers of tapia, and rested upon relatively pure sand fill.

Numerous ceramics were found within the floors and fill of this unit (see Chapter 4). Within floor #1, three diagnostic sherds were found. Two of these appeared to have been utilitarian bowls, while the third may be the remains of a medium sized *olla*. Within the sandy/carbon layer that separates floor #1 and floor #2, a single rim sherd also belonging to an *olla* was recovered. Floor #2 contained three diagnostic sherds, two of which appeared to be medium sized *ollas*, and one of which was a bottle with a burnished exterior and a restricted neck. A total of five ceramics were found within the ashy column or "posthole." These ceramics were clustered at the same approximate height as floor #2. Four of the five appeared to be *ollas* of varying diameter, while the form of the fifth was undetermined. In general, identifying the form and diameter of these ceramics is difficult due to their small size. Copious amount of carbon were collected from this unit, with a single sample from the ashy column subsequently processed (Table 5.7).

Figure 5.46 – Profile Acropolis LP-#3

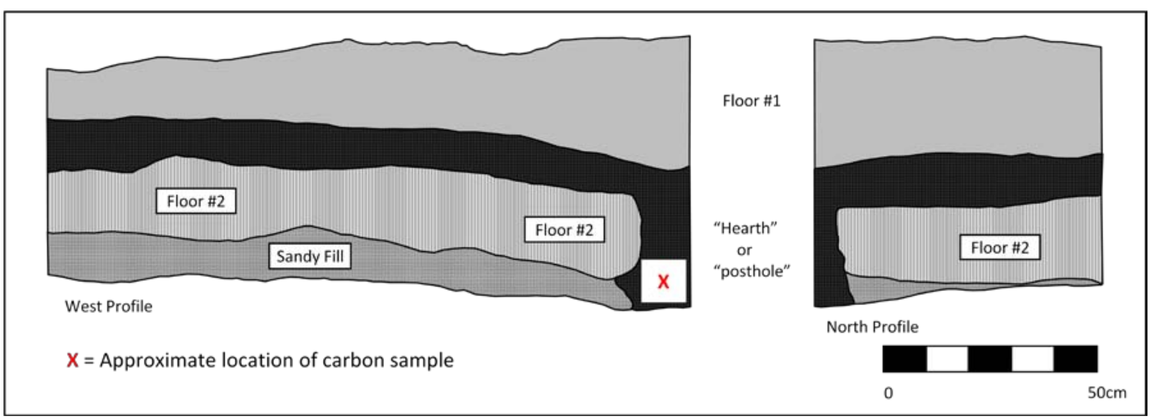


Table 5.7 - Radiocarbon Date from Acropolis LP #3

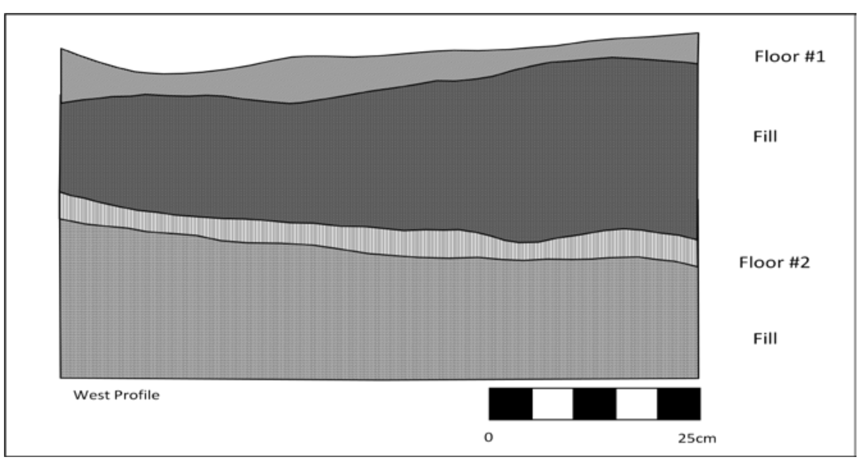
Sample Number	Unit Number	Excavation Context	Date BP
AA69636	Acropolis LP-3	Hearth sample	2423±42

Acropolis/LP #4 (For location see Figure 5.38)

This unit was placed within a looter's pit within room #2, which is made up of space that was portioned out of the main plaza (Figure 5.38). As with LP #1, this unit (60cm x 80cm) may have actually been the result of prior archaeological work within Jatanca as its sides were well squared and it had been excavated to sterile soil.

Within this unit there were two floors and one intervening fill layer (Figure 5.47). Floor #1 was made of hardened tapia and averaged about 5cm in thickness. Between Floor #1 and Floor #2 was a thick layer of hard, sandy fill that was about 25cm thick and contained small pieces of non-diagnostic ceramics, shell, and burned bone. Beneath the fill layer was floor #2 which averages about 5cm in thickness, and contains minute amounts of carbon and shell. Beneath floor #2 was sterile sand.

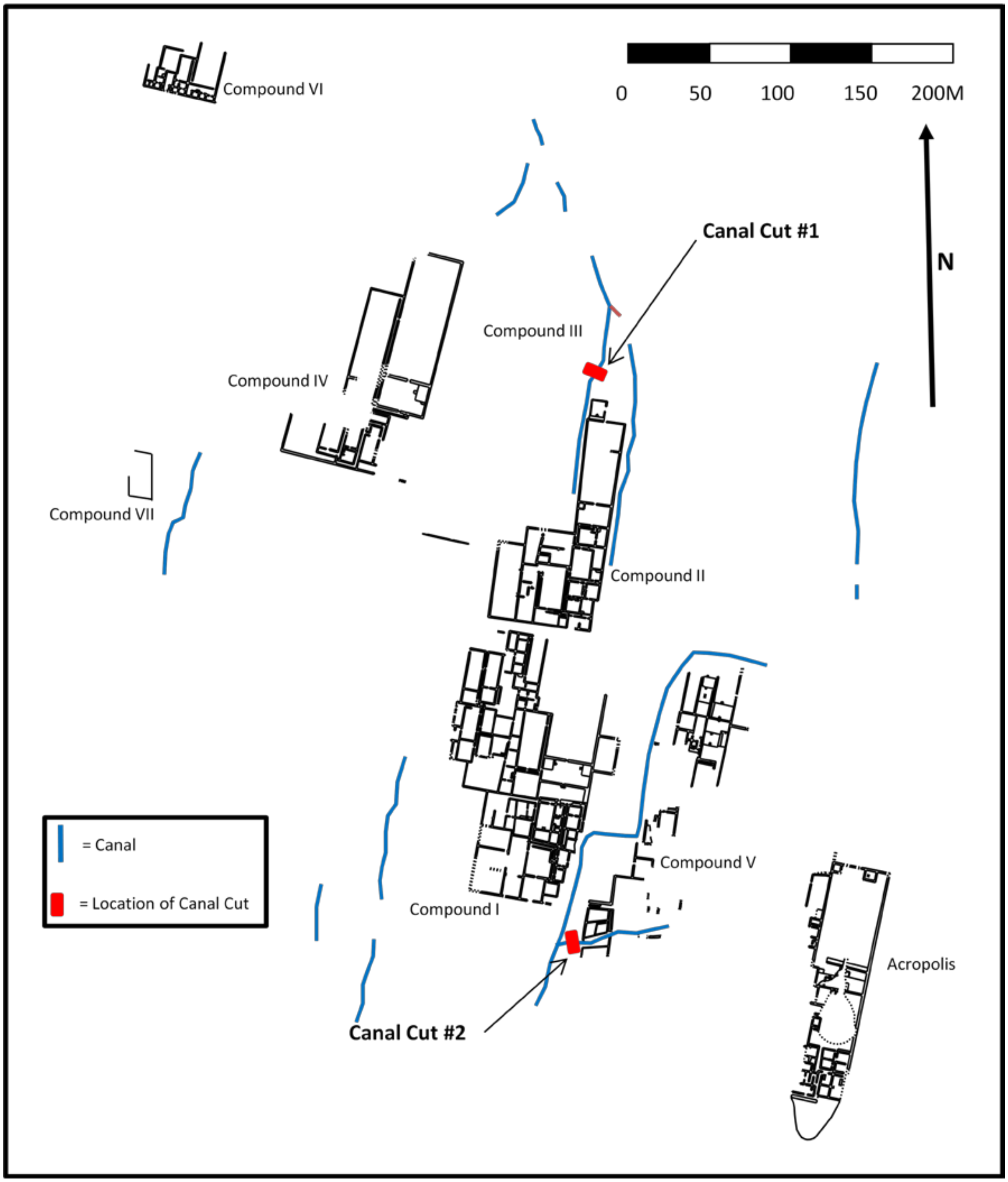
Figure 5.47 – Profile Acropolis LP-#4



Canal Cuts

Two canal cuts were made in close proximity to Jatanca. Canal Cut #1 was placed in a large, main-line canal running north-south just west of Jatanca, and the other was placed through a much smaller canal that is located within the architectural core of Jatanca. The location of the excavation units is provided in the below plan (Figure 5.48).

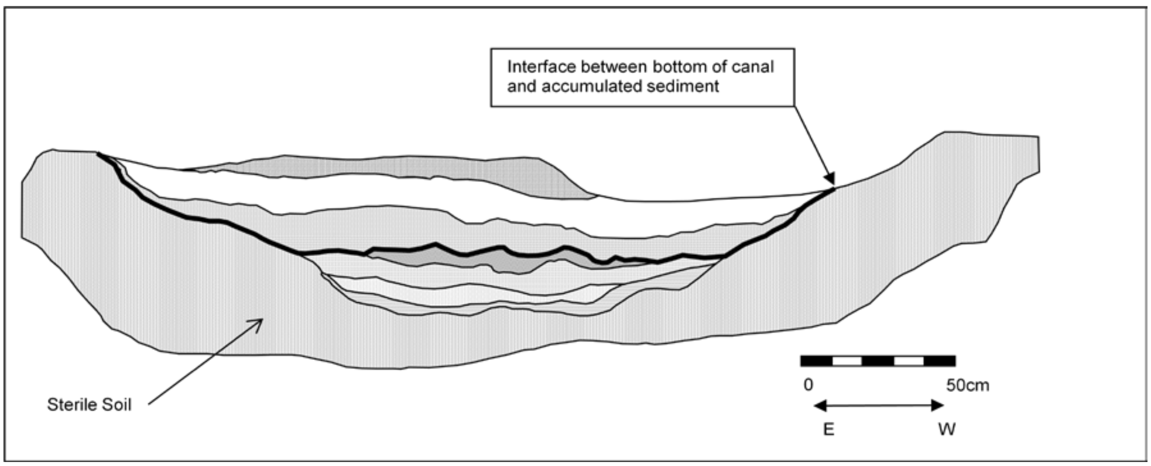
Figure 5.48 – Location of Canal Cuts



Canal Cut #1 (For location see Figure 5.48)

This canal cut was placed through the center of a north-south large canal that runs just to the west of Compound II (Figure 5.48). The cut across this well-preserved canal segment revealed the presence of several (n = at least 7 whole or partial) superimposed canal basins indicating that this canal was probably used for an extended period of time (Figure 5.49). The interfaces between these basins are clearly identifiable due to the presence of a thin layer (+/- 2cm) of fine, shiny, dense clay.

Figure 5.49 – Profile Canal Cut #1 (for location see Figure 5.48)



Canal Cut #2 (Figure 5.48)

This canal cut was placed through the center of Canal #2 just outside of the west side of Compound V and revealed the presence of a well-preserved canal sequence. The top-most layer of the cut was made up of a series of thin layers of water-born sediment (Figure 5.50). Below the surface of this layer was a well-defined break that may indicate that this canal was allowed to dry and harden before it was put back into use. The sediment below this break was largely continuous with the exception of a lens of relatively clean sand that ran through the center of this feature. This lens appears to be composed of wind-born sand and may have initially formed during a period of time that the canal was not being used, and may be the result of hasty or incomplete cleaning episodes once canal #2 was brought back on line. One carbon sample (Table 5.8) was selected for processing.

Figure 5.50 – Profile Canal Cut #2 (For location see Figure 5.48)

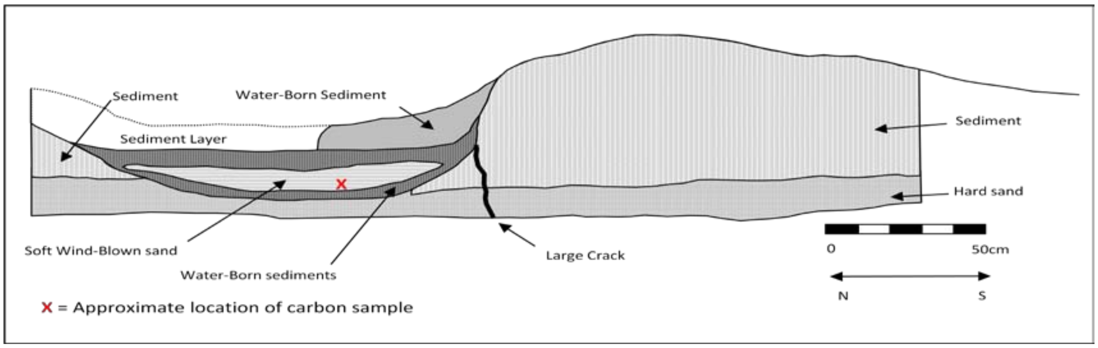


Table 5.8 – Radiocarbon Date from Canal Cut #2

Sample Number	Unit Number	Excavation Context	Date BP
Beta-216932	Canal Cut Compound V	Between Level 1 and 2	2090±40

Laboratory Processing of Excavation Material

Most of the post-excavation laboratory work was carried out in Pacasmayo concurrent with excavation, with August devoted to finishing analysis. All ceramics collected during either surface survey or excavation (n = approximately 3200) were drawn in order to compile a large portable data base that could be used for later analysis such as determining acceptable ranges of variation among ceramic types, and examining the various relationships (stylistic, chronological, etc.…) between Jatanca's ceramics, and those from other North Coast valleys (see Chapter 4).

During excavation, all floors were sampled by collecting approximately one-gallon of material within a sterile plastic bag. During the month of August, this material underwent expedient flotation collection by dumping the sample into a bucket, adding running water from a hose, stirring thoroughly, and pouring the light-fraction contents through a sterile mesh made of nylon. These samples were dried in the open air for a week and then sent to ethnobotanical experts Victor Vasquez[8] and Teresa E. Rosales Tham[9] in Trujillo, Peru for additional processing (2006; see also below). Carbon samples were stored in aluminum foil until excavation had ceased, at which point samples most-suitable for radiocarbon dating were selected; sample size and provenience (architectural association) were of special importance in this process. These samples were submitted to the INC, Lima in August as part of the petitioning process and were released for import into the United States approximately one-year later. AMS dating was done by both Beta-Analytic of Miami, Florida, and The Arizona State Mass Spectrometry Laboratory (see below).

All artifacts, ecofacts and carbon samples not otherwise legally exported to the United States are interred within the *Arco Iris* depository Trujillo, Peru. In 2006, an *informe* detailing the results of the 2004/2005 campaign was submitted to the INC (*Instituto Nacional de Cultura*) offices in Lima and Trujillo (Warner 2006). In 2007, this document was reviewed, accepted by both parties, and is currently on file at both INC locations.

Excavation and Laboratory Results

Excavation activities resulted in the acquisition of two major forms of data: descriptive data culled directly from pattern observation related to Jatanca's architecture, and data that was acquired via specialists from other related disciplines (ethnobotanical and radiocarbon dating). While both categories can be discussed in a compartmentalized fashion, by combining the two, the complex social relations responsible for the construction of the site can be better-understood. For example, excavation results can be used in isolation to discuss specific aspects of architecture such as construction materials, floor sequences, artifacts, and associated features. However, when these observations are combined with ethnobotanical results and

[8]*Director del Centro de Investigaciones Arqueobiológicas y Paleoecológicas Andinas*, "ARQUEOBIOS"
[9] *Director del Laboratorio de Bioarqueología de la Universidad Nacional de Trujillo*

radiocarbon dates, a more detailed understanding of the social, economic, and architectural development of the site is possible. For example, the results of the ethnobotanical analysis provided critical information on the foodstuffs that were being grown and consumed by Jatanca's constituents. Indeed, the report by Vasquez and Tham (2006) demonstrate that agricultural production in the Late Formative Period ay Je-1023 was a sophisticated undertaking that incorporated many different crops – both domesticated and non-domesticated. However, when combined with architectural data and radiocarbon dates acquired during excavation, ethnobotanical information also provided insight into the chronological development of Jatanca. The following sections report on the excavation and laboratory results from the 2004-2005 field season and attempt to combine these two data sets so as to better-understand the sociopolitical relationships responsible for the formation of Je-1023.

Material Used in Jatanca's Architectural Construction

The material used in forming the tapia walls can vary greatly in particle size, color, and the quality with which the layers were bonded together. In terms of material content, the wall segments are anything but uniform as evidenced by the presence of countless horizontal mini-strata within any one section. Some sections contain relatively large stones and discarded artifacts such as ceramics, or the broken stone bowl that was found in the south wall of Compound III/Unit #2 (see above). Since it is as common as not to have contrasting horizontal bands adjacent to each other, it appears as though the raw material used in the construction of Jatanca's walls was collected simultaneously by a number of people from several (assumedly) nearby locations and poured indiscriminately into the temporary form before being compacted.

Tapia is not the only material form used in the construction of Jatanca. The Acropolis has a number of conical adobes haphazardly incorporated into its walls – especially large exterior walls such as the east wall of the North Plaza (see also Ubbelohde-Doering 1966; Hecker and Hecker 1990). Compound IV also incorporates a number of brick forms; in this case, however, the bricks are carefully aligned and rectangular in shape. The chronological significance of both of these brick types is discussed below.

Unlike the walls, floors seem to have been made with a higher standard of quality control. While the material used to make a single floor can still differ markedly in color, the number of large inclusions (i.e. pebbles, gravel, etc…) is much less than that of the walls. Nonetheless, many floors also exhibit mini-stratigraphy, implying once again that numerous sources of raw material were being simultaneously accessed during floor construction. Some floors, however, were made of especially fine, or uniform material. For example, all three floors in Compound I/Unit #1 were composed of consistently fine material that lacked large inclusions such as gravel. Since the consistency and color of all three floors was similar to that of the material found within the bottom of the nearby canals, it could be argued that this material was likely acquired during canal cleaning events that anticipated the coming agricultural year. Finally, it is of interest to note that some of the floors associated with Compound IV/Unit #1 were made of an extremely fine, almost "white" matrix, the source of which has not been determined.

Based upon a general lack of inclusions such as pebbles, broken ceramics, and angular bits of gravel, the stucco material that was used to finish the rough tapia walls was generally of much finer quality than either the wall interiors, or many of the floors. In addition to being relatively free of inclusions, stucco tended to be a consistent reddish-brown in color, and composed of a very fine particulate. The remarkable consistency of this material implies that it was acquired from a fairly uniform source such as the nearby canals. As with many of the floors, it could be argued that most of the material used in the manufacture of stucco was acquired during canal cleaning episodes.

The Floors

Excavation provided information on the basic construction sequence within the compounds. Based upon the bond between floor and wall, it is clear that the floors were set in place after the walls were constructed, with excess flooring material usually pushed into the corner of the room, resulting in the accumulation of a small "triangular" deposit. The only exception to this pattern was found in the Acropolis (LP#2) where the west interior wall of the room had been placed directly upon the surface of floor #1. However, it should be stressed that this was very much the exception to the general rule as most walls (especially large exterior walls) employed a shallow footer and were clearly in-place before floors were laid.

Typically, excavation units revealed the presence of 2 to 3 floors, but numerous exceptions to this pattern were encountered. For example, Compound IV/Unit #1 had 6 floors – one of which had been made from a relatively unique fine white material. Many of the floors encountered during excavation were in a good-to-excellent state of preservation and generally showed little to moderate patching. With the exception of Compound I/Unit #1, most of the floors were largely undifferentiated as only a few potholes and burning episodes were noted (see below). In-situ artifacts were seldom encountered, and those that were (typically ceramics) were generally too small to provide much information related to room function. In fact, it could be argued that the general lack of artifacts, ecofacts, and other debris found in association with Jatanca's floors indicate that the hard floor surfaces were kept exceedingly clean (see below for ethnobotanical evidence).   This stands in direct contrast to later Jequetepeque Valley groups such as the Moche who tended to manufacture floors of a much "softer" quality that contain much greater amounts of organic and non-organic debris (see Swenson 2004 – ex. = sites Je125 and Je279).

Floor thickness ranged from approximately 1cm up to 10cm. For most units however, floors were approximately 2cm – 5cm thick. There was a general tendency for floors to thin out as they approached the center of the room. This, coupled with the pattern of material accumulation in corners, might indicate that the general procedure for floor construction was to start in the middle of the floor and work out toward the walls. However, this same pattern could be the result of normal use-wear associated with heavy amounts of foot-traffic and/or sweeping within the center of the room and considerably less around the perimeter. Finally, not enough sub-units were placed within the center of the room in order to thoroughly test this hypothesis.

Within a sequence, most floors were directly bonded to each other implying that before a new floor was laid down, the old one was thoroughly cleaned of loose debris. In some cases, there was a very fine layer of sand between floors that impeded bonding. Given how thin this layer is, it would seem, however, that this inclusion was more the result of imperfect floor preparation than an intentional act of construction.

The consistency of floor matrix ranged from “hard” to “soft” with the vast majority being of the former variety. A few examples of “soft floors” were identified, however, and these typically contained large bits of ceramic debris, shell, and animal bone both on the surface and mixed within the floor (see ethnobotanical discussion below). Given their friable consistency and the presence of atypical amounts of debris, it is possible that these “floors” were not floors at all, but were rather produced through a combination of depositional and ENSO activity. In this scenario, the rooms associated with C!-U#3 and CIII-U#1 served at least in part as areas used for the short-term collection of debris produced by compound-based activities. Upon site abandonment, a combination of blowing sand and ENSO-related water could have formed the soft interior and “crusty” surface associated with these features. This hypothesis, however, remains to be tested with further aerial excavation.

The Artifacts

Very few artifacts of any consequence were encountered during excavation, which impeded the identification of room function. Complete vessels were recovered from only two units: a bowl from Compound I/Unit #4 (Figure 5.9), and a *cantaro* from Compound III/unit#1 (Figure 5.21). Only the bowl was found in primary context as the *cantaro*, which dates to the LIP, was located in pure sand with its base located approximately 40 centimeters above the surface of floor #1. The bowl is a relatively common type found broken on the surface throughout Jatanca (see Chapter 3 and 4). Its location within this room is somewhat puzzling as this room was devoid of any other artifacts or features beyond a small north baffle that helped define the room.

A large stone bowl fragment was found exposed within the top of a wall segment that demarcated the south boundary of Compound III/Unit #2 (Figure 5.24). This fragment indicated that the bowl was fairly deep (about 5 centimeters), and had a highly-polished interior. Bowls of this type have been are associated with other North Coast Late Formative Period cultures such as the Cupisnique (Burger 1995), and Middle-Late Formative Period cultures within the North-Central Coast (Pozorski and Pozorski 1987).

The primary artifacts recovered during the excavation phase were small fragments of ceramics, only a few of which were diagnostic (see Chapter 4). In some cases these were found within "soft floors" and may have been mixed into the interior during post-occupation ENSO events. The majority of the sherds encountered during excavation, however, came from the *huaquero* pits on the elevated portion of the Acropolis. While those on the surface were of little archaeological value, others were found on or within intact floor sequences. The similarity between the excavated ceramics and those on the surface effectively demonstrated that the surface ceramics are contemporary with the surface architecture. Furthermore, excavated ceramics are similar to those typically identified as dating to the Late Formative Period (Bennett 1939, 1950; Collier 1955; Ford 1949; Strong and Evans 1952) and provide an invaluable aid in expediently dating occupational activity at Je-1023.

The Features

The only significant features found during excavation were associated with CI-U#1, which contained numerous features typically associated with domestic activity such as a deposito, hearth basin, and a possible bench. This was by far the best evidence that at least some portion of the compounds were used for occupation and that at least some individuals had taken up permanent residence within the interior (see Chapter 7). Features found within other units were of a much more meager nature.

Some units (Compound I/Unit #2; Compound II/Unit #2) revealed small patches of discolored flooring (a deep reddish-brown), or "fire-staining" that may have been the result of the use of small controlled fires used to heat and light rooms at night. Substantiating the presence of this activity further is the fact that often the floor within these areas was substantially more brittle than the non-discolored portion, revealing cracks, and holes that extended to the below floor.

A probable posthole was identified within Compound 2/Unit #2 that extended down through the three floors and into the below hard-core fill indicating the likelihood that at one point a roof made from perishable materials was associated with this room. Once again, however, the complete lack of additional features or artifacts within this unit prevents the assignation of any kind of functional role for this room. A likely posthole was also found within LP-3 near the summit of the Acropolis within room #23. There were no spondylus beads within either hole. There was also some burning activity identified on ramp/platform features in both Compounds I and IV (perhaps ritual-related) and within some rooms (perhaps domestic related).

Compound I/Unit #1, located with a relatively inaccessible portion of the compound (see Chapter 6) was the only unit that contained substantial domestic features such as a possible bench, a hearth, and a deposito. This was the only concrete evidence of significant domestic activity within any of the compounds, although some possible midden depositions were found within Compounds I and III (see above).

Burials were not encountered during excavation[10]. While it is obvious that some individuals were buried within the south end of the Acropolis, no other evidence of burials was found during the 2005 excavation season. It seems likely that a cemetery or

[10] In 2007, Proyecto Jatanca/Huaca Colorada excavated a single burial within Compound II (Swenson et al. 2008). The context of this burial (single young female; buried on axis with the room; no grave goods) likely indicates that this burial was an offering of some sort and not part of a broader burial deposition pattern. To date, this remains the only burial encountered either within, or exterior to Jatanca's compounds, despite having cleared the interior of some 30+ rooms of varying size and location (Swenson et al. 2009, 2010).

cemeteries were use to inter the dead as has been noted for later Jequetepeque Valley groups such as the Moche and Chimú (Castillo 2001; Dillehay et al. 2008, 2009, 2010; Dillehay, Kolata, and Swenson 2009; Donnan 2006; Donnan and McClelland 1997). Other projects that have excavated large areas of domestic architecture have also failed to encounter significant numbers of burials (Swenson 2004).

Faunal and Ethnobotanical analysis

Samples were collected and processed from all floors throughout excavation (see above for procedure). These materials were sent to Victor Vazquez and Teresa Tham at the University of Trujillo for analysis and quantification, which was returned in the form of a final report (2006). Below is a summary of the results which presents the faunal and floral data. All ethnobotanical data below is cited to Vasquez and Tham (2006), with site-specific interpretations primarily the work of this author unless cited otherwise.

Both macro and micro botanical and faunal materials were recovered from Jatanca's floors, with the vast majority of the information acquired through the microscopic examination of the flotation samples. Specimen identification was made by Vasquez and Tham with the aid of published sources and a comparative collection housed within the University of Trujillo. Four broad zoological groups were identified (Table 5.8): mollusks, birds, crustaceans, and mammals.

Table 5.9 – Number of Identified Specimens (Faunal) at Jatanca

Zoological Group	Number of Identified Specimens (NISP)
Mollusks	1366
Mammals	21
Birds	13
Crustaceans	2
	Total = 1402

Clearly, mollusks made up the vast majority of the total Number of Identified Specimens (NISP), followed by mammals, birds, and crustaceans. While numerous species make up the category "mollusks," the variety among mammals, birds, and crustaceans is much more limited. Only three families of mammals were identified: *Muridae* (field mice), *Canidae* (*canis familiaris sp.* – domestic dog), and *camildae* (llama). Although 13 instances of bird were identified, they were all from the same species; the pelican (*Pelecanus thagus)*. Only two instances of crustacean (crab – "purple crab") were identified, both were *Platyxanthus orbignyi.*

The mollusks came from a variety of environments such as marine, freshwater, and terrestrial. The marine snails were all identified as "cold water species" indicating that they were locally procured, typically from within tidal zones (i.e *Polinices uber, Sinum cymba*). Numerous fresh water mollusks (*Helisoma sp., Drepanotrema sp., Physa sp., Lymnaea sp.*) were also identified within the floor samples from Je-1023. Three of these, *Drepanotrema sp., Physa sp., Lymnaea sp.* were found throughout the floors of Compounds I-IV and VI, but were not typically found within those of the Acropolis. Finally, *Pupoides sp.*, a land snail, was generally found within all of the excavation units.

Interpreting the presence and distribution of the above faunal remains reveals some interesting insight into the subsistence economy, and compound function as well. First of all, the presence of the freshwater mollusks does not indicate that they were being consumed; rather they provide insight into the environment that surrounded Jatanca (Vasquez and Tham 2006). For example, *Pupoides sp*. is a small snail that lives within vegetation and under stones within hilly humid zones such as those associated with *lomas* (Vasquez and Tham 2006; see also Breure 1978, 1979). Since they are not consumed, their presence can be explained in two ways. Their presence may be the unintended result of transporting plants culled from the *lomas* back to Jatanca (Vasquez and Tham 2006). In this scenario, the snails are "hitchhikers." It is also possible that the snails were living within local vegetation that surrounded the site (Vasquez and Tham 2006). The presence of the extensive canals system that was operating during the time of Jatanca's occupation makes this an especially likely scenario as well (see Chapter 3).

Indeed, it is perhaps a combination of the two scenarios that best explains the presence of this snail; initial populations were probably transferred to the site via the collection of *lomas*-based vegetal matter where they eventually became established within the damp vegetation-filled environment that surrounded Je-1023.

The presence of numerous freshwater mollusks also argues that the canal system that surrounds Jatanca was active during the site's occupation. Mollusks such as *Drepanotrema sp., Lymnaea sp., Helisoma sp., Physa sp. and Pisidium sp.* thrive in freshwater (Vasquez and Tham 2006). The first two genera are typically found within running water, such as that of a stream or canal, while the latter three genera tend to live within swampy "backwater" locations. Since these species were not eaten, their presence within Jatanca cannot be explained as the result of consumption (Vasquez and Tham 2006). Instead, it seems far more likely that their presence within Je-1023's floor samples is the unintentional result of using material acquired during canal (and perhaps catch-basin) cleaning events for construction. Furthermore, the identification of these snails (along with the previously discussed *Pupoides Sp*.) may also provide additional data that the now dry Cupisnique Quebrada carried water during the occupation of Jatanca, meaning that the Pampa Mojucape in general was more humid than it is today (Dillehay – Personal Communication 2009). Finally, ENSO events may have also contributed to the presence of these mollusks (Vasquez and Tham 2006).

At first, the general lack of freshwater mollusks within Acropolis floor samples from LP#3 and LP#4 is somewhat surprising. However, when considered in light of the site's chronology, this absence may make sense. The above carbon dates taken from floor samples (Tables 5.1 and 5.6) indicate that the Acropolis was constructed approximately 200-300 years before Compounds I-IV (see below for detailed discussion of radiocarbon dates). Therefore, it is possible that the canals used to bring water to the site for agricultural, consumptive, and construction purposes had not been operating long enough for significant colonies of freshwater mollusks to become established during the time the acropolis was being built. In addition, if the canals had been recently constructed, then there may not have been much in the way of canal sediment that could be used to construct the floors of the Acropolis. Instead, relatively snail-free canal water may have been added to readily available desert pan in order to construct the floors of the Acropolis, resulting in relatively "freshwater-mollusk-free" floors.

It is of interest to note that marine mollusks make up a very small percentage of the overall NISP. It is possible that this is due to their generally fragmentary nature and weight: they do not tend to float within the float samples light fraction as due the small, thin-shelled terrestrial snails that contain considerable air pockets. Despite the low NISP as related to marine shell (many specimens are represented only a single time), it should be reiterated that *Donax SP*. was probably somewhat under represented despite being recovered within many of the float samples (Vazquez and Tham 2006). In fact, a simple examination of the surface material that surrounds Jatanca reveals the almost ubiquitous presence of *donax Sp.*

With regard to the other animal species recovered during excavation and flotation, only two examples of crustacean (*Platyxanthus orbignyi* "purple crab") were found. This species has been consumed along the North Coast of Peru since the Preceramic Period (Vasquez and Tham 2006). Pelican and llama bones were also recovered and may indicate that the bird was consumed on-site (Vasquez and Tham 2006). It is of interest to note that all 13 examples of pelican (along with 5 pieces of llama bone) came from one unit – the "hearth/Posthole" within the northwest corner of LP#3, indicating, perhaps, that the remains of a meal were swept into this hole after the meat had been consumed. Llama bone was also found within Compound I/Unit #3 (n=5), which might further confirm that at least part of this room served as a temporary midden for debris generated from compound I activities. In general, however, very few mammal remains were identified, which might indicate that *Donax Sp.* provided the vast majority of the animal protein intake at Je-1023 (Vasquez and Tham 2006).

Analysis of the botanical remains, which were mostly acquired by examining the light fraction, also resulted in the identification of some interesting patterns related to plant production. Plant remains identified at Jatanca include Domestic Edible (*Zea*

Maize “corn”, possible *solanum tuberosum*), Wild Industrial (*Acacia sp.* "Hawthorn," *Prosopis sp.* "Carob"), and several non-domestic plants categorized by Vasquez and Tham (2006) as “Wild Plants Miscellaneous” (*Chenopodium sp., Malvastrum sp., Cryptantha sp.,* and *Encelia sp*.). The presence of *Chenopodium sp., Malvastrum sp., Cryptantha sp*. is significant as they are weeds that invade established agricultural fields (Vasquez and Tham 2006). Therefore, their presence within the floors of Jatanca provides additional evidence that the land surrounding the architectural core was being cultivated. *Encelia sp., Physalis sp. and Solanum sp*. are also wild plants possibly obtained from the *lomas* and perhaps used for unknown medicinal purposes (Vasquez and Tham 2006). Furthermore, harvesting these wild plants and bringing them back to Jatanca would have provided a vector by which *Pupoides Sp.* could have been brought into the site (Vasquez and Tham 2006). Overall, this floral inventory indicates that residents of Je-1023 were utilizing a combination of wild and domesticated crops for both consumption and perhaps medicinal purposes.

The distribution of these ethnobotanical remains is especially interesting; only trace amounts of any of them are found within the floors of the compounds, which may indicate any one or more of several things. The lack of seeds may further demonstrate the degree to which floors within Jatanca were kept clean. In addition, it is also possible that very little plant processing took place within the major compounds, but was instead an outdoor activity (see Chapter 7). Finally, the preservation associated with the hard tapia floors may not have been conducive to the preservation of delicate ethnobotanical materials. For example, within LP#3 of the Acropolis trace amounts of *Chenopodium sp., Acacia Sp., Prosopsis sp., Malvastrum sp.,* and *Zea maize* were recovered. In addition, within LP#4, trace amounts of *Chenopodium sp., Encelia,* and *Zea maize* were also identified. This distribution might indicate that the processing and/or of these crops may have been more likely to take place on the Acropolis than within the major compounds. However, it is also possible that since many of the plant species identified for LP#3 were found within the burned southwest corner, that fire had hardened some of the seeds and made their preservation more likely when compared to those from the compounds (see Vasquez and Tham 2006).

In one respect, preservation was excellent; several examples (n=11) of starch grains that had adhered to small bits of ceramics were recovered from numerous locations throughout Je-1023. These locations include CI-U#1/floors #1[11] and #3; the hearth associated with CI-U#1; LP-#3/floor #2 and "Posthole/Hearth" feature; and LP-#4/floor #1. The association of *Zea maize* starch grains with small bits of ceramic may indicate that ceramic vessels played an important role in the processing of maize, such as they do with the production of *chicha* (Banks 1989). The shape of these starch grains is especially intriguing as they are polyhedral and form clusters as opposed to other early examples of North Coast maze which are spherical and do not form clusters. This may indicate that the maize being grown at Jatanca differs from that typically associated with "Gallinazo times" (Vasquez and Tham 2006).

On a taphonomic note, despite the compound and room-specific distribution of faunal and especially floral data, it should be remembered that the material used to construct these floors was brought in from outside of the compounds. As a result, it is possible that many of the ethnobotanical species identified by Vasquez and Tham (2006) were not necessarily stored or processed within the specific room from which they were recovered, but were brought into the rooms inadvertently as a bi-product of construction methods and materials. This is a complex issue that requires further work. Therefore, at this point to speak of room-specific plant processing /consumption activities is impossible.

The ethnobotanical analysis resulted in the compilation of a faunal and floral profile for Je-1023 that indicates that the site's subsistence economy was diverse and utilized resources from a variety of largely local ecozones such as the *lomas*, marine, and freshwater ecozones found throughout the southern valley (Vasquez and Tham 2006). The presence of numerous freshwater mollusks substantiates the hypothesis that agricultural fields surrounded Jatanca during its occupation and that the Quebrada

[11] A possible starch grains from *solanum tuberosum* ("potato") were also recovered within this floor.

Cupisnique drainage may have been active. Furthermore, the presence of freshwater mollusks within floors may indicate that construction material contained at least some refuse gathered from canal cleaning episodes. Analysis along these lines may also provide additional evidence that the Acropolis was built before Compounds I-VII.

The lack of floral material associated with compound floors can be explained in several ways. However, given the general lack of visible debris encountered on floor surfaces during excavation, it would certainly appear that cleaning episodes are at least partially responsible for the low counts associated with organic debris. Starch grain analysis demonstrated that *Zea maize* may have been an important crop that was processed at least in part with the aid of ceramic vessels (Vasquez and Tham 2006). This analysis also discovered that the starch grains identified within Jatanca are not typical of those generally associated with the North Coast during the "Gallinazo Period" (Vasquez and Tham 2006). To conclude this section, ethnobotanical analysis conducted by Victor Vasquez and Teresa Tham (2006) indicate that Jatanca has a floral and faunal set that is typical of other coastal ecologies.

The AMS Dates: Chronology of Compound Construction

Establishing compound chronology within Jatanca was a major goal of the 2004/2005 research project. Without a basic chronological framework, it would be impossible to discuss the internal architectural development of Jatanca, or understand how the site fits into the overall trajectory of North Coast urban architectural development. Therefore, carbon was collected, when available, from all excavation levels. Typically, these levels consisted of floors, floor interfaces, and features such as hearths. However, samples were also opportunistically collected from sources such as wall stucco, sandy fill, and postholes. From the hundreds of collected samples, a total of ten samples associated with Jatanca's compound architecture were selected for radiocarbon dating by both the University of Arizona and Beta Analytic resulting in the below table (Table 5.10).

Table 5.10 - Carbon Dates from Jatanca Architecture

Sample Number	Unit Number	Excavation Context	Date BP
AA69637	Acropolis LP-2	Floor #2	2470±39
AA69636	Acropolis LP-3	Hearth sample	2423±42
AA69630	Compound I/Unit 1	South Tapia Wall	2163±49
AA69629	Compound I/Unit 1	Interior of Floor #1	2062±44
AA69631	Compound I/Unit 1	Interior of Floor #3	2114±33
AA69632	Compound II/Unit 1	Interior of Floor #1	2063±33
AA69633	Compound II/Unit 2	Interior of Floor #3	2219±53
Beta-216931	Compound III/Unit 1	Interior of Floor #1	2030±40
AA69634	Compound III/Unit 1	Interior of Floor #3	2156±37
AA69635	Compound IV/Unit 2	Interior of Floor #1	2092±37

Additional radiocarbon dates from Jatanca were acquired by Dillehay and Kolata (2004). These also came from secured archaeological context such as floors and floor interfaces and were collected during the excavation phase of the 1997, 1998, 1999, and 2000 field season. Two of these samples were collected from occupation layers within the Acropolis in 1997 and subsequently processed by Beta Analytic resulting in the below table (Table 5.11).

Table 5.11 – Radiocarbon Dates from Jatanca Architecture (Dillehay and Kolata 2004)

Sample Number	Unit Number	Excavation Context	Date BP
Beta - 117746	Acropolis	Occupation Layer	2520±50
Beta - 117747	Acropolis	Occupation Layer	2370±50

Based upon the above two tables, the dates returned from radiocarbon processing form a remarkably tight pattern as no date appears to be a statistical outlier (see Figure 5.51 below), which may at least partially confirm the quality of the samples and their context as well. Ignoring the sigma values, all of the dates associated with the Acropolis (n=4) are within approximately 160 years of each other (BP2520-BP2370), while all of the dates from Compounds I-IV (n=8) are within approximately 190 years of each other (BP2219-BP2030). All dates associated with the entirety of Jatanca's architectural core are within approximately 500 years of each other (BP2520-BP2030). In addition, a sample was run from the uppermost floor (Floor #1) of Compounds I, II, III, and IV. The resulting four dates also form a tight pattern as they are within 60 years of each other, and might indicate that all four structures were still being at least partially occupied just prior to complete site abandonment approximately BP2000.

Dates acquired from architectural features within the same excavation unit also indicate a general pattern of tight clustering and internal integrity. For example, three samples were initially processed from Compound I/Unit #1. Sample number AA69630 was pulled from the stucco that covered the south wall that made up the southern edge of the excavation unit and returned a date of BP2163±49. Sample number AA69631 which was recovered from the interior of floor #3 within the same unit, returned a date of BP2114±33, or ignoring the sigma values, about 50 years later than the previous sample. Sample # AA69629, which was pulled from the interior of floor #1, returned a date of BP2062±44, a difference of fifty-two years later than the sample from floor #3. Finally, an ash sample (Beta 260943) acquired from the hearth was run by Proyecto Jatanca/Huaca Colorada and returned a date of 2020±40, later still than the date associated with floor #1. In addition to demonstrating the integrity of the dates from this unit, this sequence provides an idea as to the occupation span of activity within this room, and perhaps the compound and site as well. Ignoring the sigma values, subtracting the wall date from the hearth date indicates that activity within this room lasted for approximately 150 years from BP2163(Construction of south wall) to BP2020 (last ash sample in hearth).

A short sequence of dates was also run from samples collected from excavation Compound III/Unit #1. The sample collected from the interior of Floor #3 (sample AA69634) dated to 2156±37, while the sample collected from the interior of floor #1 (sample BETA 216931) dated to 2030±40. Ignoring the sigma values, there is a chronological gap of about 125 years between the construction of Floor #3 and Floor #1, which seems reasonable given the sequence of dates from CI-U#1. In both of the above examples, it is encouraging that there are no dating anomalies that need to be explained, and the relative dating of construction material conforms to what one would expect: walls date earlier than floors, and superimposed floors date accordingly.

Two of the canals that are adjacent to Jatanca were selected for excavation. One of the Canals (Canal Cut #2) provided an excellent piece of carbon from within a sandy lens that had been trapped by an overlying and underlying layer of organic sediment. This sample returned an AMS date of 2090±40, which is contemporary to those obtained from the major compounds (Table 5.11). This is important for several reasons. First of all, it conclusively demonstrates that during the Late Formative Period, water from the Jequetepeque River was being transported well-over 20 kilometers onto the Pampa Mojucape, and beyond - perhaps several additional kilometers to the south of Jatanca for agricultural and construction purposes. This might argue against Eling (1987) who identified many of the large, canal/*mampuestos* on the Pampa Mojucape as being Moche or Chimú in origin. While there is no doubt that both the Moche and the Chimú had the resources necessary to construct and maintain the large Pampa Mojucape canals, it is possible that many of them were constructed long-before these later groups occupied the pampa (see Chapter 3). Indeed, that a date of BP2090±40 was returned from one of the canals adjacent to Jatanca may even call into question the degree to which the Moche and/or Chimú utilized the entirety of the Pampa Mojucape for agriculture as it appears that this canal was not cleaned once it fell into disuse. Finally, since this canal runs through the southern sector of Compound V (Figure 5.48), it is possible that activities within this compound had been abandoned prior to canal construction (see also Chapter 6).

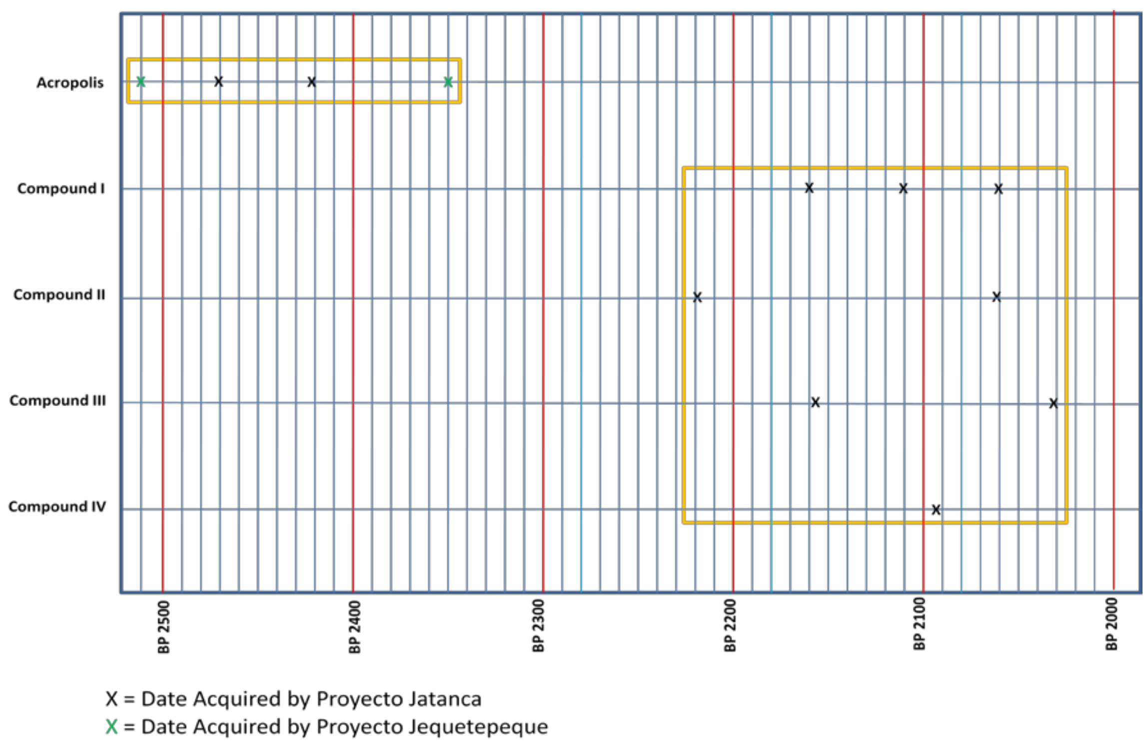
Table 5.12 – Radiocarbon Date from Canal Cut #2

Sample Number	Unit Number	Excavation Context	Date BP
Beta-216932	Canal Cut #2	Between Level 1 - 2	2090±40

Jatanca's Compound Chronology

By combining all of the radiocarbon dates acquired by both Proyecto Jatanca and Proyecto Jequetepeque (Dillehay and Kolata 2004), the following graph is generated (Figure 5.51):

Figure 5.51 - Distribution of Radiocarbon Dates from Jatanca



The above graph reveals much about the chronology and architectural development of Jatanca. Based upon dates acquired by both Proyecto Jatanca and Proyecto Jequetepeque, it is obvious that the Acropolis is probably the oldest large-scale structure at the site and probably antedates the neighboring compounds by approximately 200-300 years. The dates for Compounds I-IV also cluster and are within 190 years of each other. Therefore, there are two clusters of radiocarbon dates: those associated with the Acropolis and those associated with Compounds I-IV. It would appear that the site-wide sequence of architectural construction began with the Acropolis and was followed by the construction of Compounds I-IV approximately 200 years later. The latter compounds were built and occupied at the same approximate time. This scenario is supported by the ethnobotanical data as well (see above).

There is additional evidence that also supports this general construction sequence. The distribution of domestic ceramics at the site is generally uniform; most of them fit in with the broad chronological framework of the Norcosteño tradition associated chronologically with much of the Late Formative Period through the initial portions of the Early Intermediate period (Donnan 2009; Millaire 2009 – see also Chapter 4). Indeed, the vast majority of the domestic material dispersed around and within the compounds would be identified as either Salinar-style, or Gallinazo-style based upon the stylistic criteria first developed by those associated with the Virú Valley Project (Bennett 1939, 1950; Collier 1955; Ford and Willey 1949; Strong and Evans 1953 – see also Chapter 4). However, earlier ceramic material in the form of highly burnished finewares, have also been found in association with the southern portion of the Acropolis. In fact, it appears as though they are eroding from within the elevated southern sector and sliding down the slope. These ceramics date to the Middle Formative period and are associated primarily with the Coastal Cupisnique culture of the North Coast (see Chapter 2). Yet, the Coastal Cupisnique finewares are generally not found within or among Compounds I-VII. This "horizontal stratigraphy" reinforces what the ethnobotanical and radiocarbon dates demonstrate: the construction of the Acropolis antedates the construction of compounds I-VII and was the first example of the monumental architecture within Jatanca's architectural core.

In addition to the radiocarbon dates and ceramic distribution, there is also a material-based means of examining Jatanca's construction sequence. As previously stated, the primary material used in the construction of Jatanca's architectural core is tapia. There are, however, two examples where adobe bricks were incorporated into primarily tapia walls. The east wall that defines the large north plaza of the Acropolis incorporates numerous examples of conical adobes (Figure 5.52). Within the Jequetepeque Valley, this adobe form is generally associated with structures that date to the Formative Period (Hecker and Hecker 1990; Ubbelohde-Doering 1966). Within the southwest exterior wall of Compound IV, there are numerous rows of rectilinear adobes (Figure 5.53), a typical construction material used by later North Coast groups such as the Moche and Chimú (Moseley 1975; Kolata 1990) that have been capped with a thick layer of tapia. Therefore, within Je-1023, there may be a construction material chronology of conical adobe and tapia, tapia only, and rectilinear adobes and tapia. If this is the case, then construction material use may provide additional evidence that the Acropolis is the oldest structure within Jatanca's core, and that Compound IV may have been the last of the compounds to see significant construction[12].

Figure 5.52 - Conical Adobes

Figure 5.53 - Rectilinear Adobes

[12] Additional style-based indicators of compound chronology are discussed in Chapters 6 through 9.

Radiocarbon dating and Compound Chronology: Summary

Radiocarbon dates acquired from archaeological context indicate that the earliest known architectural development within Jatanca is associated with the Acropolis, portions of which were built by approximately BP2500, or the latter end of the Formative Period. Current dates also indicate that approximately 200 years later, the construction of the Acropolis was followed by that of Compounds I-IV, all of which appear to have been inhabited at the same time. Despite the lack of "later" radiocarbon dates, surface-ceramic (see Chapter 4) and architectural evidence (see Chapters 7, 8, and 9) would indicate that the Acropolis did not fall into disuse during the occupation of the major compounds , but continued to be used for ritual and political purposes (see Chapters 7 and 8). Finally, radiocarbon dates indicate that Jatanca was abandoned by approximately BP2000 and was never significantly reoccupied. In fact, the site's occupation may have been relatively short, lasting only a few hundred years at most.

Unfortunately, the place of Compounds V, VI, and VII within Jatanca's chronological development is unclear at this point in time due to several factors. First of all, there was insufficient time to excavate within Compound V during the 2005 excavation season. However, this compound will be undergoing a combination of excavation and subsurface mapping via ground penetrating equipment during the upcoming 2010 field season[13]. It is possible, though, that this compound was abandoned before the construction of the canal that runs through its southern sector which dated to BP2090 (see Chapter 6). With regard to Compound VI, carbon was collected, but not in great amounts, or in context that was as reliable as that found in Compounds I-IV. Therefore, it was decided that given the limited amount of funds available for processing radiocarbon samples that it would be best to not run any of the samples from Compound VI. Finally, Compound VII was not deemed important enough to warrant excavation during the short 2005 season.

[13] See also Swenson et al. 2009 for excavation results within Compound V during the 2008 field season.

Radiocarbon Dating and Jatanca's Ceramic Assemblage

Examining the radiocarbon dates and their relation to Je-1023's ceramics provides some interesting insight into their chronological relationship to other North Coast areas. For example, the distribution of radiocarbon dates acquired from LP-3 and Compounds I-IV (see Table 5.9) have a range of approximately 400-500 years. Despite this temporal gap, ceramics found within LP-3 (2423±42) are similar to those encountered within excavation context in Compounds I-IV (see Chapter 4). The apparent lack of change in these domestic types supports a key aspect of the Norcosteño model that argues there was little change in vernacular ceramics during the Late Formative – Early Intermediate Period (Millaire 2009; Donnan 2009). Furthermore, domestic ceramics recovered from excavation within the Acropolis and the Major Compounds are largely identical to those found throughout the surface of the site, which further reinforces the contention that Norcosteño domestic wares did not typically undergo significant episodes of change among the North Coast, "ethnic substrate" responsible for their manufacture.

Radiocarbon dates might also indicate that two major North Coast stylistic traditions – Negative Resist painting (from the Virú Valley to the south) and double-spout and bridge vessels (from the Lambayeque region to the north – see Donnan 1992) were combined into a single fineware ceramic type at Jatanca by approximately AD 100 (Photos 4.4 and 4.5). If the manufacture and use of this vessel dates to toward the end of the occupation of Je-1023, it would indicate an early use of negative resist painting and the double-spout strap handle form within the Jequetepeque Valley. While direct evidence of ceramic production has not been located within Jatanca to date, it seems likely, nonetheless, that this form was locally produced, as further attested by the numerous examples of tapered spouts, broken handles, and negative resist body sherds may also indicate. What is perhaps most interesting is that the unique combination of surface treatment and form may indicate its use as a local "corporate ware" by local elites as a means of differentiating themselves from similar social groups affiliated with other contemporary sites such as Mocollope in the Chicama Valley (see Attarian 2009; Millaire 2009).

Finally, the recovery of specific surface treatments such as "Ribbed Ware" and "Crenellated Rims" from excavation context within the Major Compounds would indicate that these types were being manufactured and used ca. 2000 years ago. That these types have yet to be recovered from the Acropolis may indicate that they were not produced during the early occupation of the site. If that is the case, then much like the lack of Face-Neck Jars within Je-1023 (see Chapter 4), this may indicate that there are chronological, perhaps site-specific subtleties associated with the production of domestic wares of North Coast sites during the Formative Period, somewhat contra the contentions of Donnan (2009) and Millaire (2009).

Summary of Excavation Results

The excavation program was designed to accomplish a number of goals such as clarify construction techniques and sequences, and recover ethnobotanical and carbon samples adequate for subsequent analysis by outside experts. In many respects, this phase of archaeological work was extremely successful as excavation activities:

1. Demonstrated that the compound construction sequence had little variation and generally began with the construction of the walls and was followed by the floors and other features.
2. Located diagnostic ceramics within architectural context and established a contemporary relationship between the two.
3. Identified the possibility that raw material used in stucco and floor construction was perhaps gathered from canals during seasonal cleaning events.
4. Demonstrated the unlikelihood that there had been a significant reoccupation of the site by later culture groups such as the Moche or Chimú.

5. Show that some of the canals within Jatanca might have been taken "off-line" for a period of time and then brought back "on-line" without having been cleaned (canal Cut #2).
6. Provided samples for subsequent ethnobotanical and radiocarbon analysis.

The results of the ethnobotanical analysis by Vasquez and Tham (2006) were combined with excavation data and used by this project to:

1. Argue that the Acropolis was constructed before the other major compounds based upon differing counts of freshwater snail species.
2. Demonstrate that Jatanca's constituents were utilizing a wide-variety of local resources of both domestic and non-domestic in their origin (Vasquez and Tham 2006).
3. Substantiate that Jatanca's residents were participating in an agriculture-based subsistence economy based upon the presence of invasive weeds associated with farming (Vasquez and Tham 2006).
4. Argue that floors within the compounds were kept generally clean and/or were not the loci of plant processing as a means of explaining the overall lack of small seeds within flotation samples.
5. Demonstrated that a unique variant of domestic maize was being produced nearby and processed with the aid of ceramic vessels (Vasquez and Tham 2006).

Acquiring carbon from architectural context that was suitable for radiocarbon dating was also a key aspect of this phase of the project. With the returned dates, it was possible for this project to:

1. Establish a general site-wide chronology that argues the Acropolis was the first major building within Je-1023's architectural core (BP2500) and was followed by the initial construction of the major compounds (BP2300-2200)

2. Demonstrate that the major compounds were all built, occupied, and potentially abandoned at the same approximate point in time (BP2300-BP2000)
3. Argue that the occupation at Jatanca was relatively short, lasting less than 500 years.
4. Confirm that at least some of the canals that surround Jatanca were used contemporaneously with the occupation of the site and are not the remains of later inhabitants that practiced irrigation agriculture.
5. Support a key contention made by proponents of the Tradición Norcosteño model that domestic wares underwent little in the way of stylistic change.

At this stage, most of the preliminary data associated with Je-1023 have been presented. Landscape utilization by the constituents of Jatanca in the face of environmental fluctuations was discussed in Chapter 3. It is of no small interest to note that the work of Vasquez and Tham (2006) supported many of the scenarios discussed within the chapter. The ceramic assemblage was the focus of Chapter 4. This chapter attempted to use surface ceramics as a chronological indicator of cultural development within the site. Based upon work from primarily the Virú Valley (Bennett 1939, 1950; Collier 1955; Strong and Evans 1952), it was argued that the primary occupation of Je-1023's dated to the Late-Terminal Formative Period. With these environmental and chronological data in hand, this research now shifts its focus to a study of Jatanca's monumental architecture. Chapter 6 will define key architectural complexes discussed in later chapters and examine the meaning of both idiosyncratic and shared access patterns. Chapter 7 will examine compound function, with the goal being to demonstrate that the primary function of the compounds was to provide a space for ritual activity. Chapter 8 utilizes ideas generated from Chapters 6 and 7 to discuss the possible form of sociopolitical organization associated with Je-1023. Finally, through the implementation of themes developed in prior chapters, Chapter 9 will address the possible role played by compound-style architecture and social memory in the development of monumental architectural forms associated with the North Coast urban site of Chan Chan.

Chapter Six: The Architecture at Jatanca: Form and Access

Introduction

From the very inception of archaeology as a formal academic discipline, architectural analysis has been an important avenue of prehistoric inquiry (Pearson and Richards 1994; Trigger 2003; Willey and Sabloff 1993). This has certainly been the case in the Andes where architectural preservation allows archaeologists to examine the fine details of daily life. Along the Peruvian coast, there exists a long history of architectural analysis used as a means of examining issues related to social organization and control (Bawden 1982; Feldman 1985, 1987; Pozorski 1985), economic organization (Dillehay 2004; Mackey 1990; Shimada 1994), and political organization (Moore 1996, 2005; Moseley 1975) to name but a few categories study. This chapter is intended to provide a base-line architectural description and analysis of the Late Formative Period site of Jatanca in order to better understand how it was spatially organized. This will provide a foundation that will permit the further examination of the site's sociopolitical and economic organization and coastal urban development in general (see Chapters 7-9).

Prior Architectural Mapping in the Jequetepeque Valley

Despite the presence of numerous large, reasonably well-preserved sites in the Jequetepeque Valley, few archaeological projects have focused on the creation of detailed architectural maps. For example, Ubbelohde-Doering worked at major sites with considerable amounts of well-preserved standing architecture such as **Jatanca**, **Tecapa**, and **Pacatnamú**. The bulk of his work, however, focused upon excavation, primarily for the purposes of establishing a local chronology. Ultimately, Ubbelohde-Doering published very little of his work, and no architectural maps were ever published despite the fact that he had recognized many important architectural features within both Jatanca and Tecapa such as the use of conical adobes (Jatanca - see Chapter 5) and square pillars (Tecapa - see Chapter 2).

Richard Keating and Geoffrey Conrad (1982) excavated and mapped the Chimú (but see also Mackey 2006) administrative site of **Farfán** as part of the much larger Chan Chan/Moche Valley project headed by Mike Moseley and Carol Mackey. In the face of subsequent destruction at Farfán, these maps have proven to be an especially valuable data set that have been used to identify the site's Compound I as the locus of Chimú regional political control and may have been the final resting place of the local ruler. Carol Mackey who has also worked at Farfán has augmented these original maps with her own spatial data and has identified an earlier Lambayeque and later Inca presence at this site as well (Mackey 2006).

The massive multi-component site of **Pacatnamú**, located on a high escarpment overlooking both irrigated agricultural land and the Pacific Ocean, has been the focus of several mapping efforts – two of which are especially important. The first of these maps was created by Wolfgang and Ursula Hecker, both of whom were first introduced to the Jequetepeque Valley as students of Ubbelohde-Doering. The maps they created detailed the spatial relationship between numerous pyramids, courtyards, walls, and plazas. Richard Keatinge (1975, 1977; see also Mackey 1982) used these same maps to identify what he considered to be an early forerunner of the *audiencia*, or "U-Shaped" structure. A second mapping effort at Pacatnamú was undertaken by Chris Donnan and Guillermo Cock (1986, 1997) over the course of three field seasons. They improved greatly upon the detail of the Heckers' original work with regard to the site's plan and the individual architecture of the large huacas and compounds. For example, Donnan and Cock were able to identify the presence of dais, differential access routes, and private plazas that indicated a differential distribution of power among the constituent population at Pacatnamú.

Within the Middle Jequetepeque Valley, Michael Tellenbach (1986) excavated and mapped the large Formative Period site of **Monte Grande,** located on the north side of the Jequetepeque River, just upstream from the Gallito Ciega dam and downstream from the modern village of Tembledera (see Chapter 2 for description; Figure 2.4 for location) This nucleated site covers approximately 13 hectares and is centered around a large main huaca, which is aligned just east of a north-south axis, and is made up of a series of sunken rectilinear plazas, axially located stairways, and terraced platforms (Tellenbach 1986). The sunken courts have four symmetrically placed niches in each wall (Tellenbach 1986). The terraces support a number of ancillary structures, most of which are rectilinear in form. In general, the overall layout of this monumental structure emphasizes bi-lateral symmetry, changes in elevation, and increased privacy as one travels from the south to the north (Tellenbach 1986). Numerous small huts constructed of *quincha* (see Chapter 2) surround the huaca and were grouped by Tellenbach into three broad forms of vernacular architecture: 1) Large multi-room dwellings (17-55m^2) located near the major mounds; 2) small rectilinear structures (7-17m^2) made up of 1 or 2 rooms; and 3) circular structures located throughout the site. All of the associated structures are oriented in an "orderly manner" along a northeast-southwest axis (Fung 1988; Tellenbach 1986; Moore 2005). Excavation data led Tellenbach to believe that there had been two major occupations at the site that had been interrupted by an ENSO event. Working from his maps, Tellenbach (1986) argued that the general orderliness of the site, the distribution of domestic structures, and its rapid, uniform reconstruction implied that the site was hierarchically organized with a priest-class at the apex.

Rogger Ravines also mapped a number of Middle Valley sites along the north bank of the Jequetepeque River in the 1970's (1982, 1985) and identified thirty sites that contained monumental architecture most of which he believed served a "ritual function" (1985). These examples of ritual architecture followed the natural slope of the land and employed the same general construction template: they were composed primarily of a main platform approximately 1-4 meters in height that was trapezoidal in cross-section and was constructed of stone, generously mortared with gray clay. The same gray clay used as mortar was also used to construct floors (Ravines 1982, 1985). Surrounding this architectural core were numerous rectilinear household made of perishable material (cane and wood), leaving behind only general impressions, postholes, stone breastwork, and hearths (Ravines 1982, 1985). Beyond this area, the site was further surrounded by terraces “combined with embankments and open spaces” (1985) Ravines placed all of the monumental constructions and associated settlement patterns within a classificatory scheme that ranged from simple open platforms to elaborate U-Shaped structures with axial stairways, perishable roofs, and sunken courtyards and argued that they all dated in occupation to the same approximate point in time – 1800B.C.- 1500 B.C. - a conclusion supported by the similarity in construction techniques and the associated Cajamarca valley ceramics as well (1985). Finally, Ravines argues that since these sites were occupied for a relatively short period of time changes in monumental architecture are not associated as much with changes in stylistic preference, but instead associated with a need to expand the size both vertically and horizontally (1985). Expansion episodes may have followed landslide events (associated ultimately with ENSO events), but on this point Ravines is not sure.

The most recent map-based projects within the Jequetepeque Valley were those of **Dillehay and Kolata** (1997, 1998, 2000, and 2009) and **Edward Swenson** (2004). Dillehay and Kolata undertook a large-scale, total valley survey which resulted in the publication of numerous settlement maps and architectural plans. Special concern was placed upon the position of sites and architecture relative to natural and constructed features such as canals and *surcos*, which elucidated the complex relationship between settlements and the natural environment (Dillehay and Kolata 2009). Swenson (2004) mapped a number of large-scale Moche and Chimú settlements throughout the Jequetepeque Valley using both a total station and aerial photos. Swenson focused his research on the “intermediate sites” located throughout the valley in an effort to examine the relationship between ritual activities and the maintenance of political power via the manipulation of ceremonial spaces (2004). These intermediate sites were generally composed of a series of ramps and platforms around which clustered habitation areas, walls, and cemeteries.

All of the above projects greatly elucidate the development of monumental architecture and associated settlement patterns within the Jequetepeque Valley. This research represents an attempt to contribute to these earlier studies by examining a number of architecture-related topics such as access patterns and social hierarchy (see below), the organization of space for ritual activities (Chapter 7), the relationship between architecture and sociopolitical organization (Chapter 8), and the role of social memory in the rejection and adaptation urban forms associated with Chan Chan (see Chapter 9).

Mapping Jatanca: Tools, Methods, and Conceptual Issues

In December of 2004, after the completion of the Trimble-mapping phase of this project, architectural mapping was initiated. This job was undertaken via the use of compass and tape. In addition to compound walls, other architectural features such as ramps and platforms were mapped in entirety while in the field so as to reduce spatial and/or directional ambiguity. Once back in the United States, all of these maps underwent a final correction process via both aerial photos purchased from the Peruvian Air Force, and images acquired from Google Earth. Ultimately, these initial pencil and paper maps have been digitized into a number of formats.

During the in-field mapping process, some ambiguity regarding the presence/absence of some important architectural features (i.e. doorways, benches, ramps, platforms, etc….) was encountered due to factors such as erosion, wall fall, and sand accumulation. For example, it was difficult at times to define the presence of doorways within badly eroded rooms, or whether a “ramp” was actually the result of post-occupational wall-melt. Fortunately, subsequent wall clearing associated with excavation (see Chapter 5), and/or light brushing aided greatly in feature identification (or non-identification) in times of ambiguity. In general, the identification and mapping of all suspect features was extremely conservative so as to not over represent their presence.

Tapia Construction and Jatanca

Almost every physical aspect of Je-1023, such as the walls, ramps, platforms, and floors, were made by using rammed earth technology and local soils[1] to form a highly durable and plastic material referred to locally as "tapia." In general, the existing tapia walls have a base that ranges from .5 meters to 1.5 meters in width that gradually taper toward the top. The walls were cast in fairly consistent segments approximately 2 meters in length, but the depth of each cast varies. Due to the combined forces of ENSO events and the daily prevailing winds, some wall sections are highly eroded – especially along the southernmost east-west wall segments that bear the brunt of the wind and airborne sand. Where the walls have been protected from erosion, they appear to have been plastered with a thick layer of tapia that binds the segments together and gives the wall a seamless exterior appearance (see Chapter 5 for details). In general, Jatanca's overall architectural preservation is quite good with most walls standing between one and two-meters in height.

In addition to the walls, features such as ramps, stairs, and platforms were also made of tapia. Layers of tapia used in ramp construction followed the slope of the ramp and formed a seamless, hard surface that tightly abuts the adjacent platform even today. Platforms were also constructed using rammed earth technology. It is of interest to note that the poor preservation in Compound V has exposed a series of side-by-side 1 x 2 meter (approximate size) cells that were used to elevate the surface of the platform. Platforms located in other compounds do not exhibit this construction technique, but this may be due to the presence of a well-preserved finishing layer of tapia that binds the adjacent columns and provides a seamless surface finish that obscures the cells. Finally, an examination of the ramp/platform interface indicated that the two features were constructed independently and were not poured and rammed within a single continuous mould.

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[1]Based upon a comparison between the color and consistency of much of the tapia and the adjacent canal beds, some of the raw material used in tapia manufacture may have been procured from canal cleaning episodes (see also Chapter 5).

Using rammed earth technology (Shimada 1994; Ubbelohde-Doering 1966), the inhabitants of Jatanca constructed numerous compounds that had both idiosyncratic and replicated patterns of internal organization. What follows within the remainder of this chapter is first a description of each of the compounds with an emphasis placed upon identifying idiosyncratic and replicated uses of space. Next, an analysis of access patterns (beta analysis, gamma analysis, etc…) is presented with the goal being to elucidate the relationship between architecture and social hierarchy. Finally, a comparison between the access patterns of Jatanca and the nearby site of Pacatnamú is made in an effort to examine the time-depth behind possible valley-specific patterns of architectural access and internal organization used later by the architects at Chan Chan.

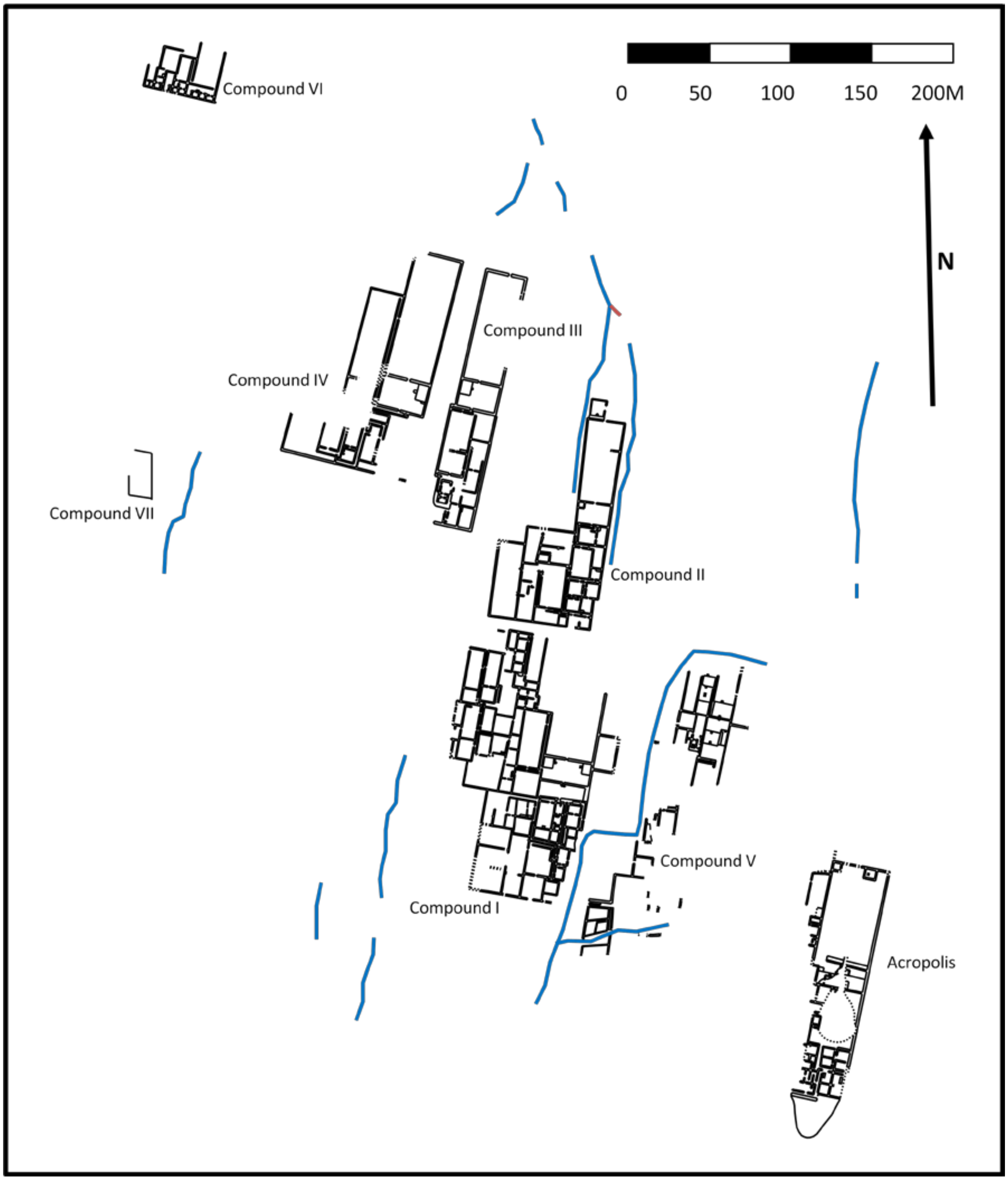
The Architecture of Jatanca: A General Description

Jatanca's architectural core is made up of eight quadrilateral compounds (Compounds I-VII and the Acropolis) of varying size, configuration, internal complexity, elevation and quality of preservation (Figure 6.1). All of these structures are oriented just east of a north-south access and vary in their individual orientation by a few degrees at most. Surrounding the core is a large, dense ceramic scatter (at least 27 hectares) composed primarily of utilitarian wares traditionally associated with a number of Formative Period North Coast cultures such as the Cupisnique, Salinar, and Gallinazo (but see Chapter 4). A series of predominantly north-south canals are interspersed throughout the domestic zone and provided water for local consumption, construction and irrigation (see Chapters 3 and 5). In general all of the compounds are clustered together (within 800 meters of each other), with the possible exception of Compound VI and VII, which are located slightly to the west of the architectural center. While it would appear as though there is quite a bit of open space between the Acropolis and Compound V, this may not necessarily be the case, however, as Compound V is in very poor condition and much of its eastern sector may be missing due to erosion. The sporadic presence of small elongated tapia mounds and short wall segments within this otherwise open area further substantiates this possibility as do images from Google Earth.[2]

To the immediate west of Compound V is Compound I. These two compounds appear to be the same approximate length, and are physically separated by a shared canal that runs initially along the north-western flank of Compound V, and then crosses over to continue along the south- eastern edge of Compound I. To the north of Compound I is Compound II. These two structures are approximately the same width and are separated by a narrow east-west corridor that is 7 meters wide. The axis of Compound II is oriented slightly more toward the north than the compounds within the immediate vicinity. There is a canal located on the east and west edge of Compound II. To the west and slightly north of Compound II is Compound III. This is the narrowest of the compounds (approximately 40 meters) as it lacks any kind of a western annex, which may be due to its close proximity to Compound IV. While no canals were identified in close proximity to Compound III, a small feeder canal was identified to the immediate north and probably provided water for this zone of the site. Located approximately 10 meters to the west of Compound III is Compound IV. This compound is the same approximate length as Compound III and has a similar plan to that of Compound II. Ninety meters to the southwest is Compound VII. This small compound is made up of a single open room with a likely entrance located on its northeast corner. Approximately 150 meters from the northwest corner of Compound IV is Compound VI. This compound is located a bit outside of the Jatanca core as determined by both its spatial proximity to the center and the distribution of surface ceramics. It is of interest to note that while Compound VI has its entries located in the north and therefore shares the typical north-south orientation of other Jatanca structures, it is the only structure that is wider than it is long.

[2] This general area will be tested for the presence of architecture via ground penetrating radar during the 2010 field season.

Figure 6.1 – Jatanca Architectural Core



Compounds I—V and the Acropolis all have various examples of Plaza/Ramp/Platform Complexes (PRPC), which are made up of somewhat predictable combinations of plazas, ramps, and platforms that vary in size, number and arrangement. When these features are combined with other variables such as location within the compound and plaza size, three general categories of PRPCs can be identified: The Primary PRPC, the Secondary PRPC and the PRPC Variant.

All of the major compounds have a highly standardized **Primary PRPC** which is always located within the northern portion of Zone 1 and is made up of two conjoined rooms that were enclosed by an almost continuous two-meter high wall. Room #1, a large open plaza, is separated from room #2 by a low-lying wall that functions primarily as a retaining wall that elevates the surface of room #2 approximately one-meter above the ground level of room #1. There is a central, direct entry that permits movement between these two rooms via a combination inset/projecting ramp. Room #2 contains two elevated platforms, each fronted by centrally-placed ramp. These platforms are located in the northeast and northwest corner of room #2 and are placed in mirror opposition. Located within the south wall of room #2 is a baffled entry that permits access into additional rooms within the compound. This complex also served as a primary entrance into the compound, and the only entrance into Compounds I-IV. There are small idiosyncrasies associated with each PRPC and these compounds and these are described below and in association with each compound

The **Secondary PRPC** is essentially a smaller version of the Primary PRPC as it is made up of the same constituent parts that are organized in the same way. It differs, however in terms of its distribution, location, and size. For example, Secondary PRPCs are found only within Compounds III and IV. Furthermore, they are located deeper within the interior of the compound and smaller in size. However, despite this size differential, they are still a large complex and consume a considerable amount of the total compound space. There are subtle differences between the Secondary PRPCs and these are discussed below and in association with each compound.

The **PRPC Variant** has three key components – a ramp(s), a platform(s), and an open area that could serve as a plaza. As the name “variant” implies, this complex could take on many forms and vary in size from relatively small (Compound I and Compound II), to visually dominating (Acropolis). Due to their idiosyncratic form, it is difficult to offer a general description of their layout. Instead, they will be described below in association with their respective compound.

In addition, two examples of what has been termed the Plaza/Dais/Stair/Platform Complex, or **PDSP Complex** have been found within Compound III and Compound V (Swenson et al. 2009; Warner 2006). This complex is similar to the PRPC Variant with only a few alterations. Within its enclosed plaza, the PDSP Complex has at least one low rectilinear dais-like structure located on the central axis of the room. This plaza is fronts an elevated room and access between the two is provided via a short stairway. The orientation of this complex is always north-south. The layout and features of the PDSP Complexes associated with Compounds III and V differ slightly and will be described below in association with each compound.

Final compound features of special importance are a number of retrofitted Traffic Altering “Plugs” (TAP). These small additions were made of tapia, narrower (30-50 centimeters width) than the surrounding walls (about 1 meter width), and constructed of a much darker, redder and more friable material than that used during initial construction. In most cases, recognizing these features was easy as they were not very well-bonded to the surrounding walls. Plugs were used in three ways: to block room access; to block zone-to-zone access; and in one case, to create a new room. In many cases, the addition of plugs radically altered pre-existing access patterns (see below). Several of these were used to alter the flow of traffic in Compound I and at least two more were used within Compound II to the same effect.

Compound I

Compound I (Figure 6.2) is approximately 170 meters in length by 100 meters in width and is made up of at least 75 rooms which are connected in one of three ways: direct entry, baffled entry, and lengthy hallways, making it the largest and most complex of the Jatanca compounds. It is oriented 12 degrees east of true north. Beyond the identification of walls, ramps, and platforms, little else in the way of architecture is visible on the surface, with the exception of a small number of provisionally identified benches. Due to the amount of wind erosion, however, bench identification was speculative at best as it was often impossible to determine the difference between benches and differentially eroded double-walls that were laid parallel to each other. It is known, however, that benches were used on occasion within Jatanca as a well-preserved example was excavated in Compound I/Unit #1 (see Chapter 5). Finally, at the time this structure was mapped, there was quite a bit of sand within many of Compound I's rooms – especially those located in the physical center of the structure – which further hindered the identification of architectural features.

Entry into this compound could be made through at least nine entrances: three in the east, two in the west, and four the north. This is the only large compound within Jatanca that has multiple entrances as Compounds II, III, IV, and the Acropolis all appear to have only one entrance. Most of the additional entrances into Compound I are relatively shallow and are associated with rooms (or zones) that appear to have been added on to the initial form at a later date (see below). It should be noted that there may have been more entrances on the east, west, and south, but because of the poor preservation of these exterior walls, it is difficult to be sure.

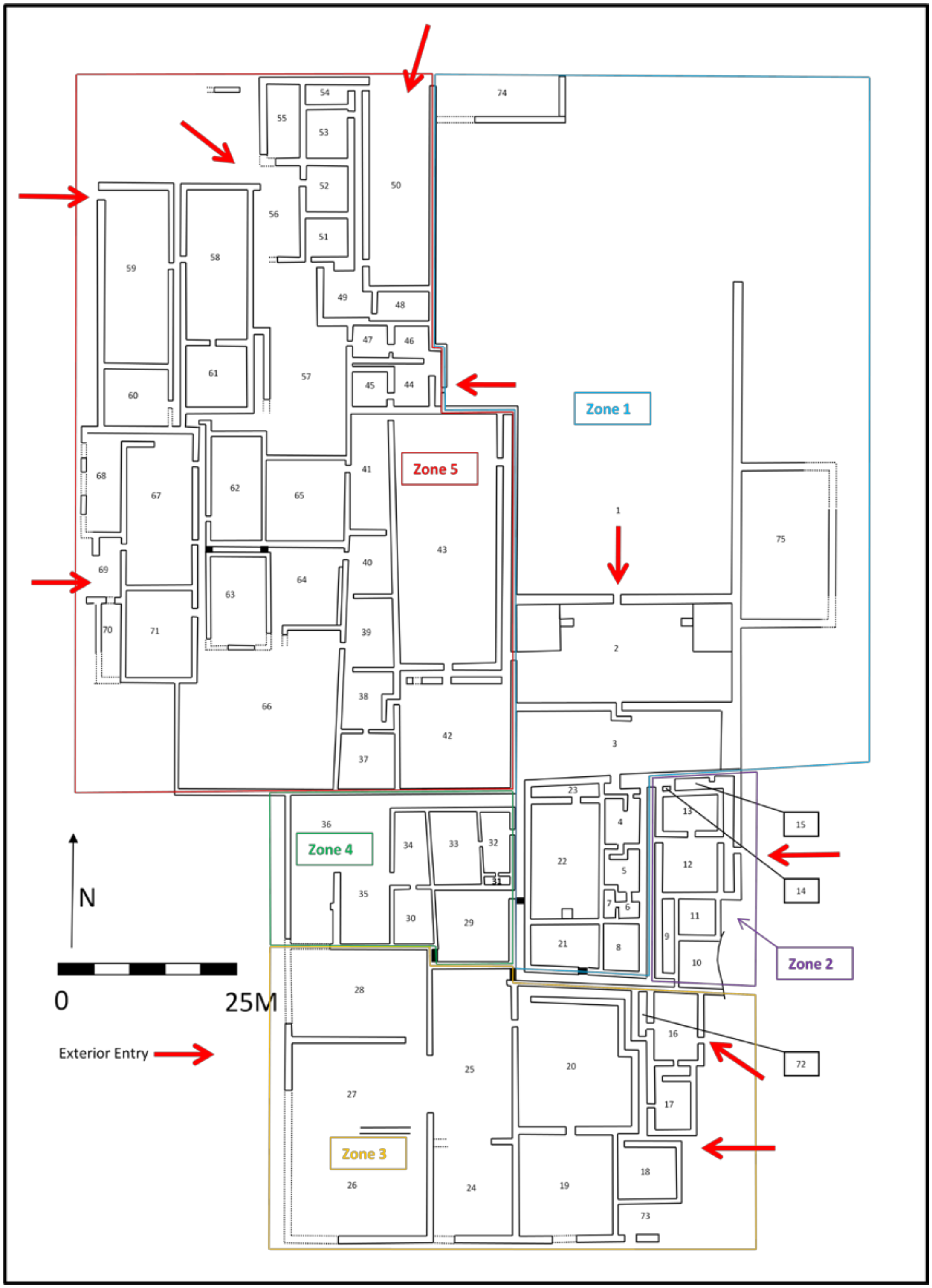
Zone Identification

Zone identification within Compound I, as with all of Jatanca's compounds, is somewhat subjective. Generally, zones are identified as areas of contiguous room blocks that have been partitioned from the surrounding compound via the use of wall alignments and points of restricted access. Based upon these criteria, Compound I can be split into five major zones.

Zone 1 consists of rooms 1, 2, 3, 4, 5, 6, 7, 8, 21, 22, 23, and 75. This zone is initially accessed from the north via room #1, which also makes up the northern half of the Primary PRPC. Room #2 lies to the immediate south of room #1, is elevated approximately one-meter above the plaza floor, and makes up the southern portion of the Primary PRPC. This room also contains two large platforms located in the northwest and northeast of the room placed in mirror opposition of each-other. Both platforms have a central ramp that projects out toward the center-line of the room (see Chapter 5 for excavation details within this area). Access between these two rooms was made via a single, direct entry and a combination inset/projecting ramp.[3] Access into room #3 (and beyond) is made through the south wall of room #2 via a baffled entry. There is an additional direct entry located to the south of the west ramp/platform feature that also permits entry into the interior of the compound. Room #3 is large, rectilinear in shape, and permits access into the remainder of zone 1. It is also the node by which zone 4 is accessed (see below). Also located within this zone is a PRPC variant made up of rooms #21, #22, and #23 that form a pattern somewhat reminiscent of the Primary PRPC (rooms #1 and #2). Room #21 is made up of an elevated platform, the surface of which is approximately one-meter above the surface of adjoining room #22. Access between the two rooms is made via a well-preserved, centrally located ramp. Room #23 is an elongated room accessed via a direct entry from room #22. At some point after initial construction, the entry into room #21 was sealed with a tapia "plug" (see below). Room #75 is attached to the exterior east wall of room #1. Erosion has destroyed the northeast and southeast corners of this room, making it impossible to determine the exact point, or means of entry. Nonetheless, it can be determined that there was no means of accessing room #1 from room #75.

[3] Evidence of this ramp was found in 2008. Unfortunately, it is in poor condition and establishing the exact dimensions of this feature was impossible.

Figure 6.2 – Compound I – Plan



Z**one 2** is made up of rooms #9, #10, #11, #12, #13, #14, and #15. Access into much of this zone appears to have been made through a single entry that permits access into room #12 and room #15 (see Chapter 5 for excavation details). There are three rooms within this zone that do not have any visible means of access: room #9, room #11, and room #14 (see Chapter 5 for excavation details). Access into the interior of Compound I via this sector was curtailed by the placement of two expedient plugs made of tapia located in the southeast entrance into elevated room #21, and within a lengthy hallway just to the south of the northeast entrance into room #29 (see below).

Zone 3 encompasses the entire southern end of Compound I and is made up of rooms #16, #17, #18, #19, #20, #24, #25, #26, #27, #28, #72, and #73. When zone 1, zone 2 and the eastern half of zone 3 are combined, it creates a long, linear feature that may have constituted the original configuration of the compound (see below). In general, this zone is in a relatively poor state of preservation, which has resulted in obscured patterns of access, both in terms of identifying external points of entry into zone 3, and potential movement inside+ the zone itself. There appear to be numerous large rooms connected by direct entries within much of this zone, but this assumption may be as much the result of poor preservation and sand accumulation, as based in fact. While there may have been additional entrances on both the east and south side of this zone, once the plug was set in place, there was no direct, internal access through the northern perimeter via room 25. In fact, once this doorway was closed, it was impossible to directly access Zone 1, Zone 2 or Zone 4 from Zone 3 via an internal route. Therefore, much like Zone 2, despite being physically attached, this zone is physically cut off from the bulk of Compound I.

Zone 4, is made up of rooms #29 through #36. Once the above-mentioned tapia plugs were constructed, entry into this zone could only be achieved by first passing through room #1, room #2, and room #3 in Zone 1, making it among the most “private” areas within Compound I. This area is well-preserved and has been the focus of quite a bit of additional archaeological study by both Warner (2006), and Swenson et al. (2008, 2009, 2010). Excavations in 2005 uncovered a small domestic unit within the southeast corner of room #33 (see Chapter 5), while excavations in 2008 revealed the presence of a large platform (northern end of room #33) and numerous fineware ceramic vessels (room #31) also within this zone (Swenson et al. 2009; for ceramics, see also Chapter 4).

Zone 5 is made up of rooms #37 through #71, all of which are located in the northwest corner of Compound I. When compared to the other zones that comprise this compound, access into Zone 5 appears to have been much less restricted due to the presence of at least six exterior entrances. However, it is interesting to note that like zones 1-4, zone 5 is spatially isolated from access and activities with the larger compound. In fact, there are only two direct links between this zone and the rest of Compound I. One of these links is through the doorway in the west wall of room #2, and the other links room #1 with rooms #44 and #46. Otherwise, for the most part, activities within this area are spatially segregated from the bulk of Compound I.

It is worth noting at this juncture that the rooms and associated zones that make up Compound I are not as interconnected as it might appear at first glance, and are instead grouped into five fairly distinct clusters. There are only two instances where the five zones are internally linked: Zones 1 and 4 are directly linked, and Zones 1 and 5 are directly linked. Otherwise, zone access is generally made through an exterior entry. The significance of this spatial patterning will be discussed below in considerable detail.

The Plaza/Ramp/Platform Complex

The Primary PRPC is made up of rooms #1 and #2. This is the largest PRPC within Jatanca and appears to lack a north wall, which might indicate that this plaza was somewhat "open" and easily accessible. By extension, activities carried out within the plaza would have been viewable to those standing outside of the plaza's perimeter. This may not, however, have been the case as when Compound I is viewed with Google Earth, what appears to be an old footer can be seen extending out to the east from the southern wall of room #74.[4] Given that the large north plazas associated with

[4] The presence or absence of this footer will be tested with ground penetrating radar during the 2010 field season.

Compounds II-IV and the Acropolis are enclosed on the north, it seems likely that the north plaza in Compound I was enclosed as well. In addition, the direct entry behind the west ramp/platform feature is unique among the Primary PRPCs.

Presence of a Mound/PRPC Variant

The PRPC Variant within Zone 1, Compound I consists of rooms #21, #22, and #23. Room #21 is the northernmost room and is elevated above the floor of room #22. Access between the two rooms is made via a single ramp that is located along the north-south axis of the room – just off-center from the direct entry that links room #22 with room #23. At some point after initial construction, the entry into room #21 was sealed with a tapia "plug" (see below).

Traffic Altering Plugs

Three "plugs" were used to significantly alter the flow of traffic within Compound I. For example, a plug was used to block access into the south end of room #21, and by extension, the associated PRPC variant. In addition, the northeast corner of room #25 was also plugged, which effectively terminated interior traffic between Zone 2 and Zone 3. To the north of room #25 another plug was placed within a lengthy hallway that restricted access from Zone 2 into Zone 4. The placement of this plug also eliminated access from Zone 2 into Zone 1. In Zone 5, two plugs were used to create a narrow room by capping each end of the hallway that separates the north side of room #63 from the south side of room #62. The significance of these traffic altering features is discussed at length below.

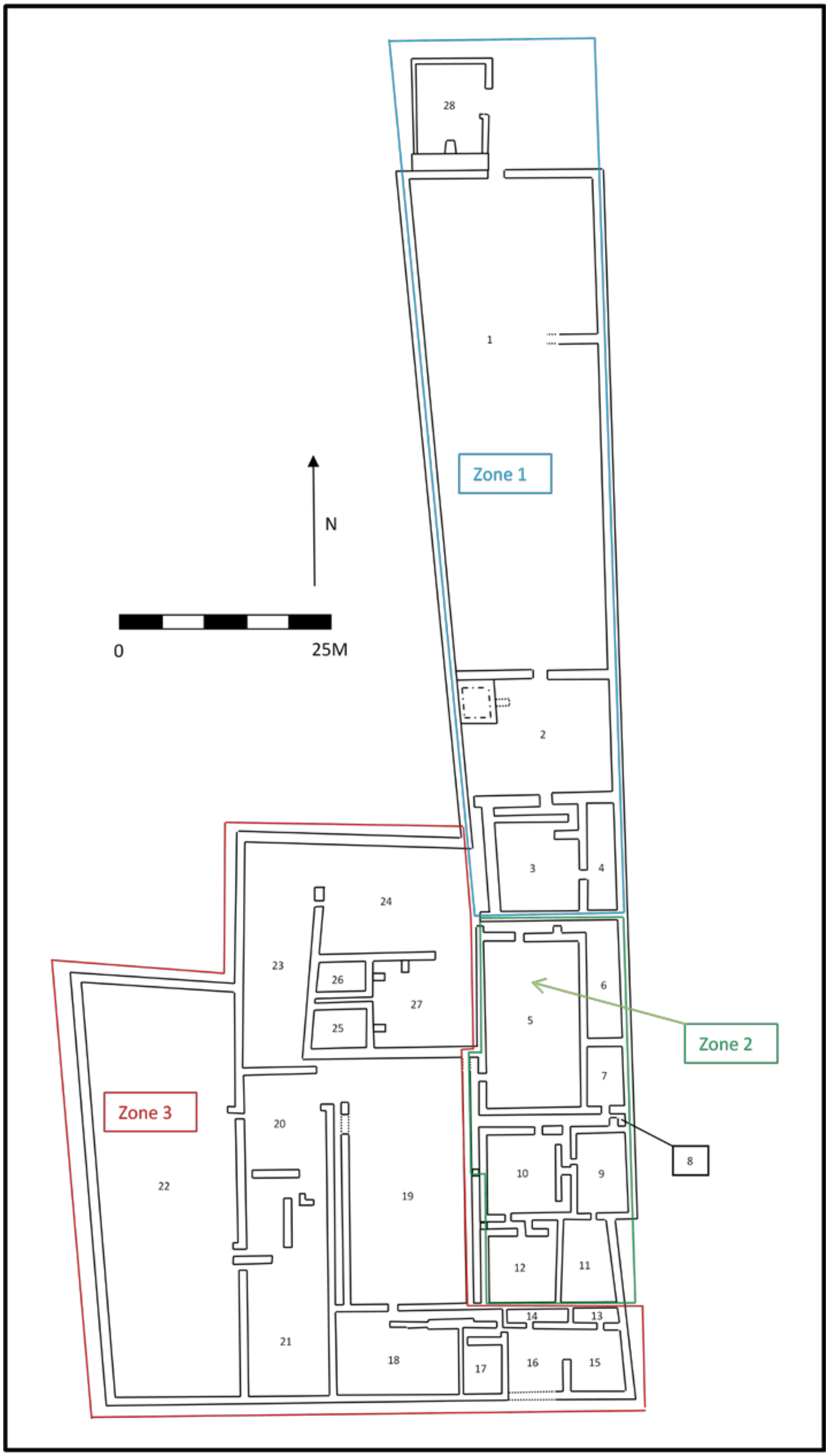
Compound II

Compound II (Figure 6.3), the second largest of the Jatanca compounds, is approximately 150 meters in length by 70 meters in width and made up of at least 28 rooms connected in any one of three ways: direct entry, baffled entry, and lengthy hallway. The north-south axis of this compound is oriented 8 degrees east of true north. Large portions of this compound are obscured by sand accumulation – especially in large rooms such as rooms #20 and #21. It seems likely that there is only one entry into this compound which is located in the center of the north wall of room #1. Adjacent to this entry is a small, U-shaped room that contains a PRPC variant similar to that in Compound I. There is a large annex consisting of room #18 through room #27 that juts out from the southwestern portion of the compound's central, linear form. Beyond the identification of walls, rooms, ramps, and platforms, little else architecturally is visible on the surface, with the notable exception of a small mound made up of room #25, room #26, and room #27. The overall preservation of this compound is excellent, probably due in part to the fact that Compound I shields it from the prevailing southern winds.

Zone Identification

Based upon access patterns and wall alignments, Compound II can be broken up into three major zones. **Zone 1** in is made up of the primary PRPC (rooms #1 and #2), the PRPC variant (room #28), and rooms #3 and #4. External access into this Zone is made through a centrally located, narrow entry located in the north wall of room #1. To the immediate west of this entry is room #28 which contains a large platform with a centrally placed ramp. The entrance into room #28 is wide and opens to the east, thereby allowing occupants to oversee traffic in and out of Compound II. Room #3 is reached via a baffled entry and connects to room #4 through a direct entry. There is an additional entry in the southwest corner of room #2 that permits access into the remainder of the compound. The outline made by the shared exterior walls of room #1 and room #2 is trapezoidal in form.

Figure 6.3 – Compound II – Plan



Zone 2 is located to the immediate south of, and in line with zone 1 and is made up of rooms #5 through #12. When zone 1 and zone 2 are combined, it creates a long, linear feature that may have constituted the original configuration of the compound (see below). The rooms in this zone vary greatly

in area and can be entered only from Zone 3 (described below) through a direct entry located in an east-west hallway that provides access into room #5, and beyond into room #6. The bulk of this zone is accessed through an additional door located to the south within the west wall of room #5. Zone 2 is not directly connected to zone 1.

Zone 3 consists of the entire southwestern annex (rooms #18 through #27) along with a series of rooms that abut the southern tip of Zone 2 (room #s 13- #17). The only point of access into this zone is through an extremely narrow opening - approximately 50 centimeters in width - in the southwest corner of room #2. Once past this door, one has unimpeded access into the remainder of Zone 3, and into Zone 2. It is possible that there may have been an additional south entrance into Compound II that permitted direct access into room # 16. However, it is impossible to know for certain as erosion has destroyed the above ground portion of the wall. Based upon examining the pattern of exterior/interior entrances for the other large compounds, the presence of an entrance in this location seems highly unlikely. Rooms #25, #26, and #27 make up a mound that rises approximately 2 meters above the floor of the surrounding rooms.

The Plaza/Ramp/Platform Complex

The primary PRPC within Compound II is made up of conjoined rooms #1 and #2 and is entered through a direct doorway centrally located in the north wall of Room #1. There is a partial wall near the central entry that abuts the east wall and sub-divides room #1. The wall is relatively low and evidently would not have blocked the view of those standing in this area from events occurring within room #2. The function of this wall remains unclear.

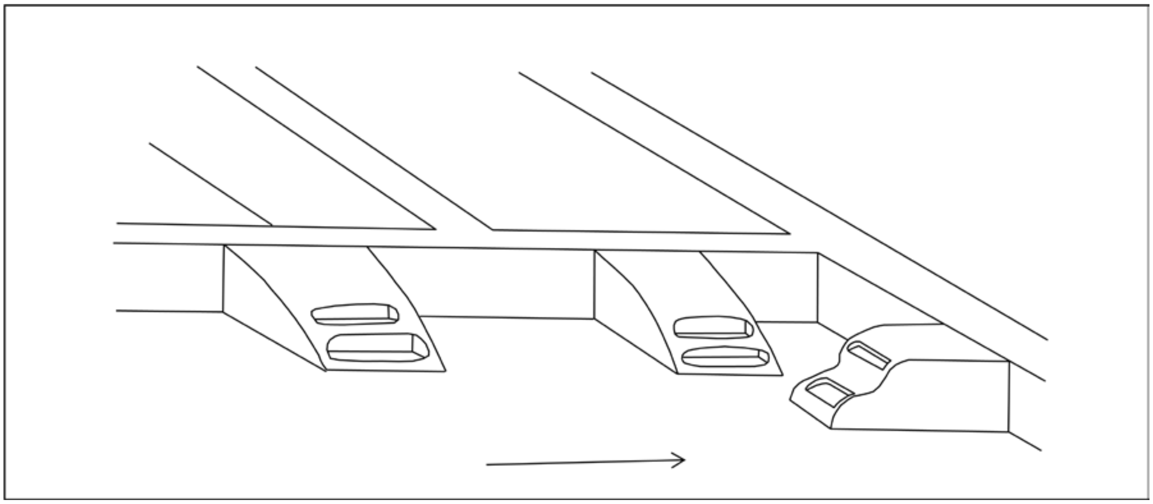
The southern end of room #1 is dominated by a one-meter high retaining wall that forms the north edge of room #2. The difference in elevation between the two rooms is negotiated via a single inset/projecting ramp that extends approximately three meters into the plaza. A low, poorly-preserved platform is located within the northwest quadrant of room #2. Excavations in 2007 indicated that this platform's interior, the length of its southern edge, and its central ramp were removed in the immediate past (Swenson et al. 2008). Based upon what was left of this feature, however, it is clear that this was the remainder of a ramp/platform that had been oriented east-west, and probably sat in mirror opposition to an additional ramp/platform feature in the northeast corner of room #2. To date, no secondary PRPCs have been located within Compound II.

Presence of a Mound/PRPC Variant

Within Zone #3 is a low-lying mound that rises approximately 2 meters above the level of rooms #23 and #24. This mound is made up of rooms #25, #26, and #27 and is in a position to oversee traffic moving between Zone 1, Zone 2, and Zone 3. Within room #27, a series of three stair/ramp features organized in an "L"-shaped pattern was found on the last excavation day during the 2008 field season (Figure 6.4). The stair/ramp features appear to be a unique hybrid that combines aspects of both ramps and stairs. On the "front" of the stair/ramp there are two shallow, rounded stairs with possible low-lying ramparts used to define the exterior edge. Beyond the second stair, the feature slopes up like a rounded ramp and terminates into the respective, abutting wall. Two of the stair/ramps are centered relative to adjacent rooms #25 and #26, while the third stair/ramp is located on the south wall of the room and overlooks room #24.[5]

[5] Scheduled for excavation in 2010

Figure 6.4 – Ramp/Stair Features in Room #27 – Looking West (not to scale)



The function of the stair/ramp features, or room #27 is not clear. It is possible that they could have served as a stairway between room #27 and the respective rooms they abut. For example, excavations in 2007 revealed that the interior of room #25 is approximately 1 meter deep and lacks an entry (Swenson et al. 2008). Therefore, the stair/ramp could be used to aid a person trying to move between room #27 to room #25. Unfortunately, there are numerous mechanical problems with this particular functional explanation. The floor of room #25 is much lower than the floor in room #27. As a result, the wall that divides the two rooms is not very high within room #27, but is much higher within room #25 – about 1.5m. If the stair/ramp was used to facilitate changes in elevation, one might also expect to find a similar feature within room #27. This, however, is not the case as room #25 (excavated in 2007 – Swenson et al. 2008) is empty. In addition, the northernmost stair/ramp terminates on the top of the east-west wall, approximately 2 meters above the floor of room #24, and is not associated with any kind of a *deposito*-like room as are the other two.

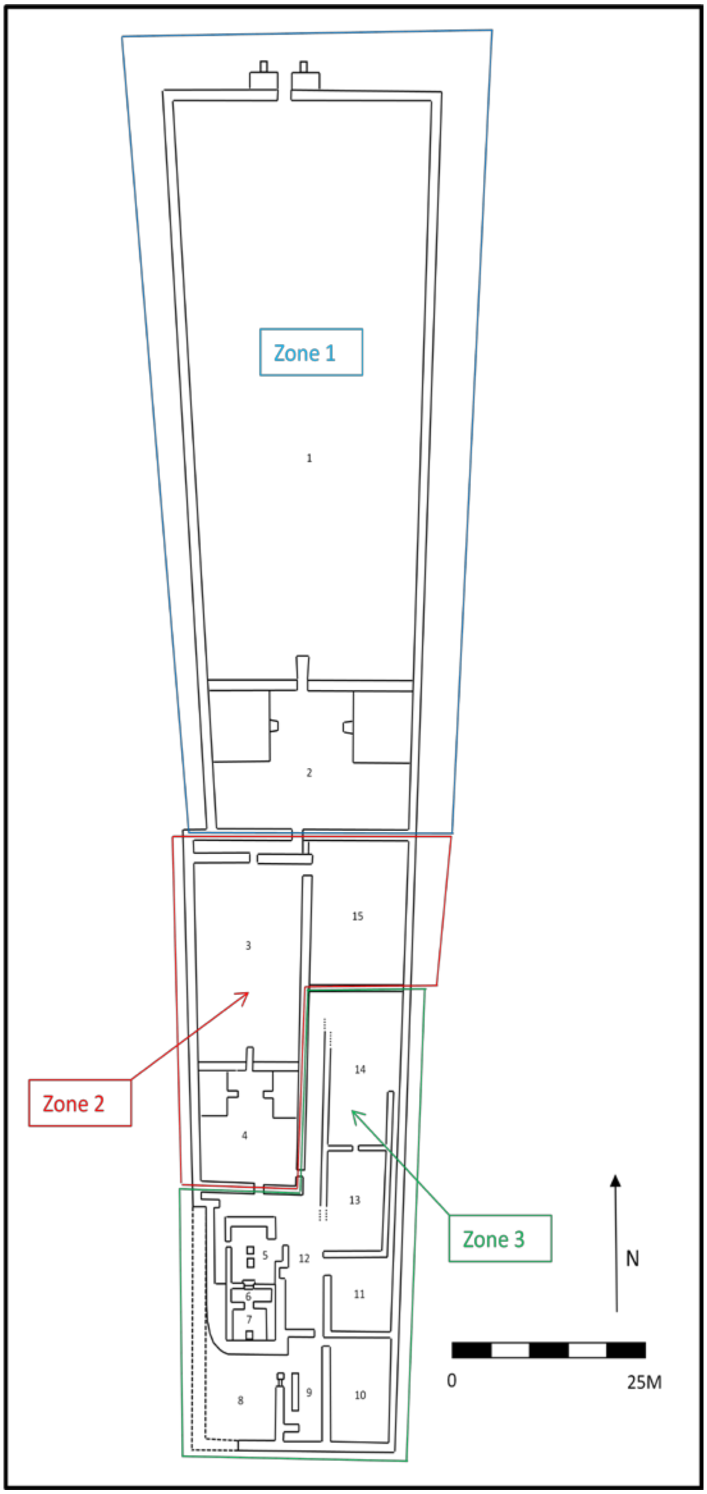
Traffic Altering Plugs

There are two tapia plugs located in Compound II. Unlike those used in Compound I, the utilization of plugs in Compound II has not had nearly as profound an effect upon traffic patterns or zone/room access (see below). The southernmost plug blocks the baffled entry into room 10 and 12 from the lengthy north-south hallway, making access into this room possible only after first passing through room 10. A second plug was placed within this same lengthy hallway and created an inaccessible area within a formerly lengthy, north-south hallway. To date, this area has not been excavated. Finally, unlike the plugs in Compound I, neither plug in Compound II resulted in any changes in inter-zone access.

Compound III

Compound III measures approximately 170 meters by 40 meters and is made up of at least 15 rooms connected via a combination of baffled entries, direct entries, and lengthy hallways (Figure 6.5). This compound is oriented on a north-south axis similar to that of Compound I – about 12 degrees east of true north. Portions of Compound III are obscured by active sand dunes – especially in large rooms such as #1, #3, and #4. Similar to Compound II, it appears as though there is only one interior entry, which is located in the center of the north wall of room #1. One unique aspect of this compound is its lack of a western annex, giving it an overall linear, quadrilateral form. It is possible that the close proximity of Compound IV to the immediate west made it impossible for an annex to be added. It is also possible that Compound III had a different overall function that did not require an annex. This, however, seems somewhat unlikely as discussed further below.

Figure 6.5 - Compound III - Plan



Zone Identification

Based upon access patterns and wall alignments, Compound III can be broken down into three major zones: Zone 1 is made up of rooms #1 and #2 (The primary PRPC), Zone 2 consists of room #3 and room #4, while zone 3 is comprised of the remainder of the compound, or rooms #3-#15.

Zone 1 is entered from the exterior by first passing between a pair of north-south oriented ramp/platform features[6] located in mirror opposition on each side of room #1's north entry. There is an inset/extending ramp that facilitates movement between room #1 and room #2, which is elevated about 1 meter above the use-surface of room #1. The outline made by the shared exterior walls of room #1 and room #2 is trapezoidal in form.

A baffled entry located in the approximate center of the south wall of room #2 connects zone 1 with **zone 2**, and leads directly into the plaza (room #3) of the secondary PRPC (room #3 and #4). There is an inset/extended ramp that facilitates movement between room #3 and room #4, which is elevated about 1 meter above the use-surface of room #3. As with rooms #1 and #2, the outline made by the shared exterior walls of room #3 and room #4 is trapezoidal in form. Room #15 is located to the east of the Secondary PRPC and is a large, open room that has no other point of entry.

It is of interest to note that the entry within the south wall of room #4 is not baffled, but is instead direct and allows access into zone 3. Nonetheless, there is a large, high (1.5m) wall that effectively serves as a baffle and shields activities in room #5, #6, and #7 from the view of anyone in room #3 or room #4.

Zone #3 is made up of room #5 through room #14. Once one has gained access into room #12, the bulk of zone 3 is easily accessible. Rooms #5, #6, and #7 are of special interest as they re somewhat unique within Jatanca. Room #5 contains what can be best-described as two small, on-axis daises within the center of the room. The northernmost dais is about .75m², whereas the southern dais is rectangular and about

[6] These structures were discovered during the 2008 season.

1.25m by .75m. Both features are in-line with a small inset/projecting stairway that connects room #5 with the elevated room #6. Room #6 contains a rectilinear platform that has a single direct entry in its south wall providing access into room #7. Room #7 has a large, rectangular dais located against the south wall. All three of these rooms have been badly looted. Rooms #5, #6, and possibly room #7 as well likely functioned as a combined unit much like the PRPC. Therefore, they are referred to collectively as a Plaza/Dais/Stair/Platform complex (or PDSP complex). This significance of this architectural configuration is discussed in detail below, and again in Chapter 7 (see also Swenson et al. 2009).

The PRPCs and PDSP Complexes within Compound III

Compound III has two well-preserved PRPCs that are largely identical in layout, but differ in terms of their relative size and location. There is also a PDSP composed of rooms #5 and #6 that is located upon an internal elevation, or mound, at least 3 meters in height that was constructed with compacted tapia on a foundation of pure sand fill (Swenson et al. 2009).

The Primary PRPC

At 2668 square meters, the primary PRPC within Compound III is the smallest of the five identified within Jatanca. However, in terms of percentage of primary PRPC to compound, it is easily the largest as approximately 50% of the total space within Compound III (5281 square meters) is devoted to this feature (see below). The primary PRPC in Compound III is entered through a direct doorway located in the north wall of Room #1. Flanking each side of the north door is a pair of mirror-image ramp and platforms that are oriented north-south. The southern end of the plaza is dominated by an approximately one-meter high retaining wall that abuts its entire width and forms the north edge of a large platform, or Room #2. The platform is accessed from the plaza by a single inset/extended ramp that protrudes approximately five-meters into the plaza. On each side of the inset portion of the axial ramp is a pair of ramp/platform features oriented east-west in a mirror-like configuration. Both of the platforms are placed within the northern outside corner of this room and have an outset ramp that is more or less centrally placed. Located in the approximate center of the south wall of this room is a single baffled entry that provides access into room #3, and the rest of the compound.

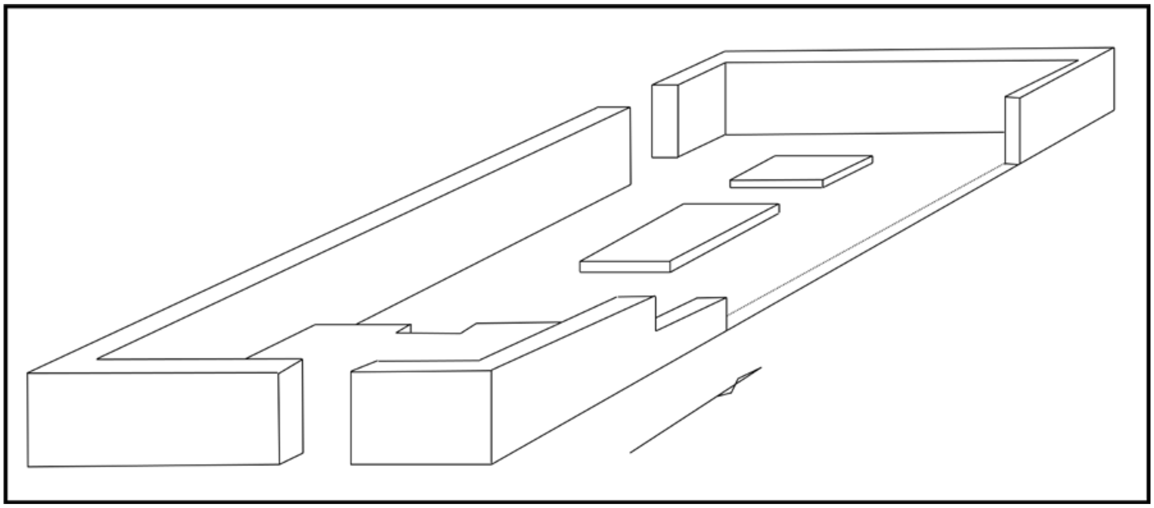
The Secondary PRPC

The secondary PRPC is made up of two rooms (room #3 and #4) and is entered through a direct entry located in the middle of the dead-end hallway serviced by the baffled entry first entered in room #2. Room #3 is open and provides an unobstructed view of room #4, which is elevated and contains the ramp/platform structures. There is a small door in the northeast corner of the plaza that permits access into room #15. Movement between the plaza and the ramp/platform room is regulated via an inset/extended ramp that projects approximately 3 meters into the plaza. This ramp has poorly preserved, low ramparts along both edges. As with the public PRPC, the ramp/platform features in the private PRPC are oriented east-west in mirror-like fashion and are located within the northern exterior corners of the room. There are two doors in this room, one of which is located in the northeast corner, and the other of which is located in the approximate center of the south wall that provides access into room #12. While this entry is not baffled, there is a large wall placed immediately behind the entry that makes it impossible to view activities occurring in room #5, room #6, or room #7. When the area dedicated to the primary PRPC is combined with the area that was dedicated to the secondary PRPC (675 square meters), the percentage of Compound III that was dedicated to these four rooms jumps to 63% of the total compound area.

Presence of a Mound/PDSP Complex

The PDSP complex (Figure 6.6 and Figure 6.22) within Compound III is elevated approximately two meters above the adjacent desert floor to the west and is composed of two axially-aligned rooms (#5 and #6) that were excavated during the 2008 field season (Swenson et al. 2009). As with both of Compound III's PRPCs, the rooms that make up the PDSP are oriented in a general north-south direction, incorporate an elevational change, and uses architectural elements such as doors and stairs in order to emphasize an overall central axis to the plan of the complex. However, unlike the PRPCs, the PDSP utilizes a stairway as a means of negotiating the difference in elevation between the plaza and the platform. In addition, there are two daises between, and on-line with both the stairway and the doorway that connects this complex with room #7, meaning that the interior elements appear to be oriented north-south. It is difficult to say with certainty, but room #7 may also make up part of this complex as evidenced by the interior presence of what was thought to have been a large tapia dais that was positioned on axis with the direct entry into the room, the stairs in room #6, and the low daises in room #5. Entry into this complex can only be made through room #5, which has two direct entries: one in the east wall and one in the west wall. When the area of the PDSP (approximately 180 square meters) is added to the area of the PRPCs, the percentage of total space given to ritual/ceremonial architecture within Compound III is approximately 67% (see below).

Figure 6.6 - PDPS Complex looking northwest (not to scale)



Compound IV

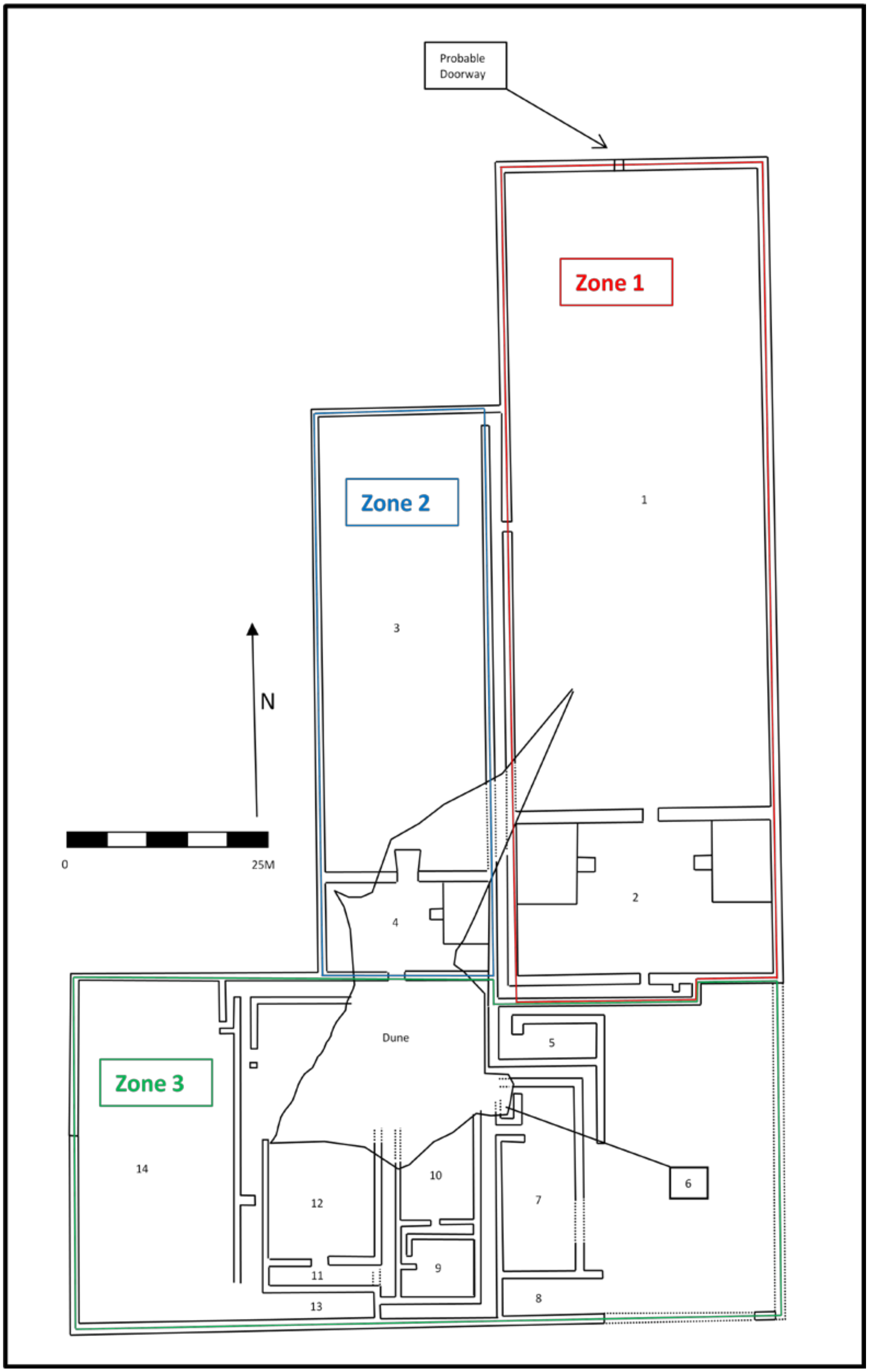
Compound IV (Figure 6.7) is approximately 140 meters by 75 meters in size and is made up of at least 14 rooms that were visible over the course of three field seasons: 2005, 2007, and 2008. Compound IV is oriented approximately 11 degrees east of true north, giving it an axis similar to that of Compounds I and III. Despite the presence of stationary sand dunes within this structure and relatively poor preservation in its southeast corner, it is clear that the rooms that make up Compound IV are connected via a combination of baffled entries, straight entries, and lengthy hallways. This is the only Jatanca structure that has incorporated a significant number of rectilinear adobe bricks into its architecture as they make up the vast majority of the western-most wall and a portion of the southwest corner of room #14. It should be noted, however, that capping the adobe brick segment along its entirety is a layer of tapia approximately one-meter in height. Compound IV is similar to Compound II in terms of its overall form as there is a large “L-shaped” annex that bulges to the southwest of the linear core of the compound. Finally, while there does not appear to be any kind of an architectural mound associated with this compound, this may not be the case as there is a tremendous amount of semi-stationary sand that covers the approximate location that one might anticipate finding an elevated feature.

Zone Identification

Due to the stationary dunes and the erosion of the southeast corner, zone identification in Compound IV is somewhat difficult. In 2007, some of the large sand dunes that had obscured the western portion of this compound had passed to the south, allowing for the maps to be updated. In 2008 the dunes had not moved much, but excavations that targeted areas that had been covered by sand in 2004-2005 aided greatly in clarifying the presence of additional features such as doorways, ramps, and platforms.

As a result, the tentative presence of three zones has been identified to date. **Zone 1** is composed of rooms #1 and #2, or the primary PRPC which is unique for several reasons. As of 2008, no obvious, formal entry has been found into room #1 via the north wall. It should be noted that there is an opening in the approximate center of the north wall, but erosion has destroyed the unequivocal presence of a well-defined door. In addition, the footer within the opening appears to be continuous, which argues against the likelihood of an entry since footers are generally not continuous across a doorway within Jatanca (Warner 2006). It seems reasonable, however, that a central door may have been retrofitted into the originally continuous north wall and the footer left in place. In addition, there is a formal entry in the west wall of room #1 that leads into a long north-south hallway that provides exclusive access to both the south side of room #2, and the northeast corner of the plaza associated with Compound IV's secondary PRPC.

Figure 6.7 – Compound IV – Plan



Zone 2 is made up of rooms #3 and #4, or Compound III's secondary PRPC (see below). This is a relatively large zone with no direct exterior access. The south wall of room #4 has a single entry (probably baffled) that permits one to enter Zone 3. This area is well-preserved and contains at least one ramp/platform feature that was excavated in 2008 (Swenson et al. 2009). The corresponding ramp/platform feature was not excavated due to the amount of sand located in the western portion of room #4. The outline made by the shared exterior walls of room #3 and room #4 is trapezoidal in form.

Unfortunately, **Zone 3** is difficult to define due to the large sand dune that has not moved appreciably in the last four years and the erosion that has destroyed much of the southeastern portion of this compound. Excavations in 2008 within room #5 revealed that the walls of this room were well-preserved and stood over 2-meters high. Yet to the immediate east of this, much of the compound has been destroyed by erosion. It should be emphasized that the dotted lines that demarcates most of the southern, and all of the eastern walls of this zone are speculative and based upon what is known about the form of Compound s I-III, and the presence of partial, poorly preserved wall segments found within this approximate alignment. From what can be observed, however, this zone contains at least 10 rooms of varying size and shape all of which are connected via a combination of long hallways, baffled entries and direct entries. The proportion and likely exterior dimension of some of these rooms (such as rooms #11 and #12) may indicate the presence of additional private PRPCs.

The Plaza/Ramp/Platform Complex

As with Compounds I, II, and III, there is a primary PRPC located within the northernmost portion of Compound IV. When the spatial organization of this PRPC is compared to those found in the other compounds, however, the access patterns within Compound IV are clearly atypical. For example, there may not be a central north door that permitted access into the interior of room #1. In addition, there is a door in the northwest corner of room #1 that permits direct access into the long hallway that connects room #2 with room #3. Finally, the baffled entry in the south wall of room #2 does not lead immediately into a large room located to the south, but instead into a hallway that directs traffic back to the north and ultimately into either room #3, or back into room #1. The exact significance of these organizational differences is not known. Complicating this issue further is the fact that vast portions of Compound IV are either buried in a semi-stable sand dune, or eroded beyond surface recovery.

Dividing rooms 1 and 2 is a low-lying wall that functions at least partially to elevate the floor level of room 2 approximately one-meter above that of room #1. Access between these rooms is made via a direct entry, with the elevational difference negotiated with the aid of an inset ramp. Unlike compounds I, II, and III, there is no projecting portion to this ramp. Room #2 contains two platforms with associated centrally located ramps that are oriented east-west. These features are located in the northwest and northeast corner of the room in mirror opposition to each-other. The south wall of room #2 has a single baffled entry that permits one to enter or exit the room from the south.

The Secondary PRPC

At almost 1400 square meters, this secondary PRPC is the largest of its kind within Jatanca and almost as large as the primary PRPC associated with Compound II (see also Swenson et al. 2009). Room #3 does not have a central north entry. Instead, the primary entry into this room was made by a direct entry in the northeast corner that ultimately connects the Secondary PRPC to Room #2 via a long, indirect hallway. The elevational change between rooms #3 and #4 is made via a large, well-preserved inset/projecting ramp that extends approximately 3 meters into room #4. Room #4 is elevated approximately 1 meter above the level of the southern plaza and contains two ramp/platform features that are oriented east-west. These features are located in the northwest and northeast corner of the room. When the total area of the private PRPC is combined with the public PRPCP, the percentage of total known area used for ritual purposes is approximately 55% of the total compound area.

Compound V

Compound V (Figure 6.8) is located between Compound I and the Acropolis. While this study will treat Compound V as a single continuous compound made up of three distinct zones, it should be noted that this area of the Jatanca complex is poorly preserved, making it impossible to know this with complete certainty. It is possible that Compound V, as defined here, is actually more than one continuous compound. An examination of this area using Google Earth, however, leaves one with the impression that the three zones do in fact make up a single large, albeit poorly preserved structure. Future, aerial excavation should be able to better-determine the interconnections between the three readily visible segments, and further identify the presence of rooms, room blocks, features and zones.

Zone Identification

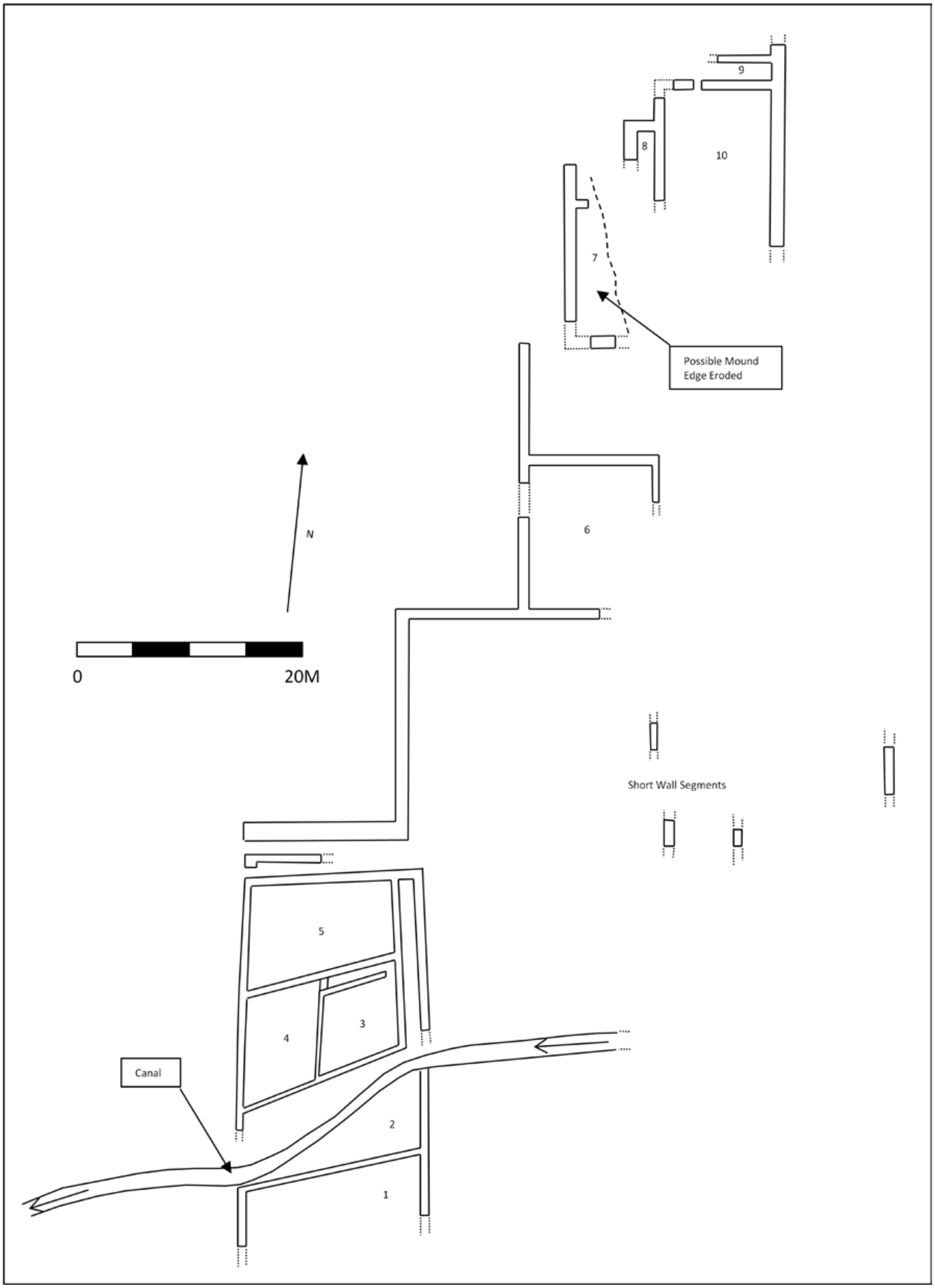
Zone A, like the northern portion of Compounds I and IV, is poorly preserved (Figure 6.8). Many large wall segments have been eroded down to ground level, leaving huge gaps in the exterior and interior walls. Nonetheless, 10 rooms in varying states of preservation oriented along an axis approximately 8 degrees east of true North have been identified, and these can be further broken down into two easily identifiable groups.

The first group is made up of a collection of 5 heavily eroded rooms. The second group is composed of the remains of what appears to be a low-lying mound – similar to those noted above in Compounds II and III. Connecting these two groups are four long wall segments that meet a right angles, which also partially form room 6.

Despite the poor condition of this compound, a number of interesting observations about the architecture can be made. For example, within the southern group, the internal walls that divide many of the rooms are considerably less than square – a somewhat atypical condition within Jatanca. In addition, as with some of the rooms in Compound I, rooms #3, #4, and #5 do not have any visible entrance. Also, the baffled entry that connects rooms #3 and #4 was filled at some point with a tapia plug, thereby eliminating access between these two rooms. The presence of a dead-end hallway, another typical architectural element employed by Jatanca's architects is located in the east of zone A.

Of perhaps greatest interest within this group is the canal which runs east-west through room #2. Initially, it was hypothesized that the use of this canal post-dated occupancy at Jatanca. In 2005, a cut was placed through this canal near the west wall of room #2 and an isolated carbon sample was collected for radiocarbon dating (see Chapter 5). This sample returned a date of 2090±40BP. Therefore, it is likely that either the canal was actually designed to pass through already existing architecture, or Compound V may have been built around the canal during initial construction or an episode of expansion. It is, of course, also possible that both the canal and the compound were designed and constructed during the same episode. If the canal was constructed first, however, this may explain the unique wall angles found within the southern portion of Compound V, as the walls were constructed in order to accommodate the course of the canal, which was in turn dictated by the its points of origination, destination, and the slope of the land.

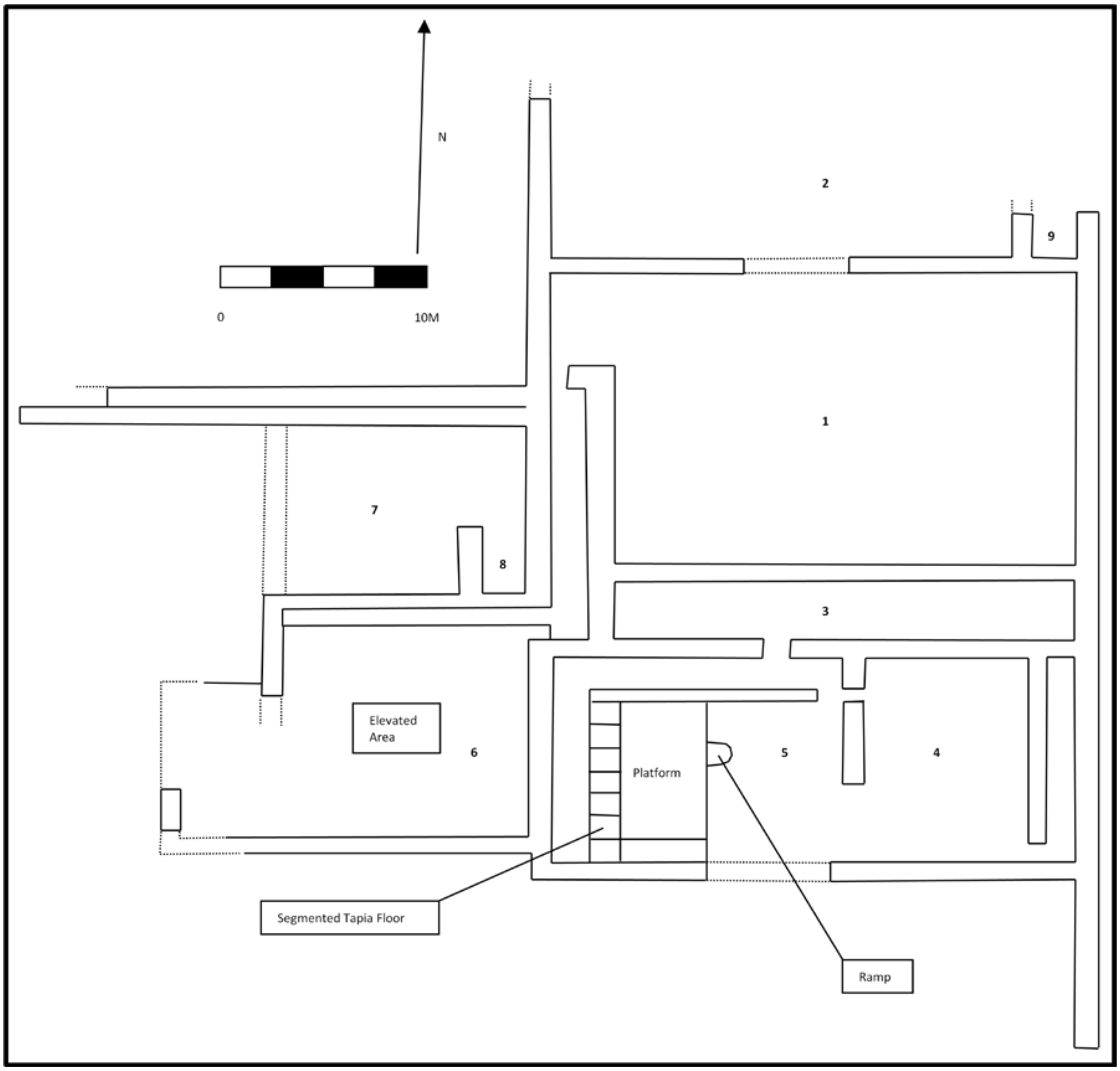
Figure 6.8 – Compound V/Zone A – Plan



In the northern group, the southwest portion of room #7 is reasonably well-preserved and may be the remnant of a low-lying mound similar to those identified within Compounds II and III as it is made out of a deep layer (approximately 1.5 meters) of tapia.   It is of further interest to note that partially-preserved rooms #8, #9, and #10 are reminiscent of the configuration made by rooms #5, #6, and #7 in Compound III – albeit their orientation is toward the south and not the north. Unfortunately, at present time, not much more can be said about this sector.

Zone B (Figure 6.9) is located to the immediate east of Sector A, approximately 40 meters from the west wall of the Acropolis. This Sector is made up of at least 8 rooms in various states of preservation accessed via baffled entries, direct entries, and lengthy hallways. Additional architectural features found in this zone include dead-end hallways, ramps, and platforms.

Figure 6.9 – Compound V/Zone B – Plan



Of special interest within this zone is an east-facing PRPC variant within room #5 that faces the Acropolis. The platform is made from multiple, adjoining tapia segments so as to create a continuous elevated floor of a relatively uniform height. There is no "finishing" coat of tapia, or floor to cover these adjoining blocks. It seems likely, however, that had there been one, it might have been subsequently eroded. This ramp is located away from the centerline of the platform and favors the north. The north and west edge of the platform help form a dead-end hallway that terminates in the southwest of room #5. To the immediate east of room #5, partially separated by a tapia wall is room #4 and an attached dead-end hallway that terminates to the north. Room #3 is accessed from room #5 via is partially baffled entry created by a tapia extension that originates in the northeast corner of the platform. This is one of the few rooms in Jatanca that has the axis of the length oriented east-west, making it somewhat unique. The entrance into this PRPC variant may have been located in the south somewhere within the missing wall segment.

Room 2 may have been connected to room #1 via an entry located somewhere within the missing shared wall segment. The west end of room #1 partially made up of a long hallway that is slightly baffled at its northern entrance, and dead-ends in the south near the # 5. Another branch of this same hallway leads to the west and provides access to another platform located in room #6. Finally Room #7 and room #8 appear to be segregated from the rest of Zone B. It is possible that the entry into room #7 was located in the poorly-preserved western wall.

Zone C can be divided into four sub-zones based upon the intersection of major north-south and east-west walls (Figure 6.10). These four sub-zones are not directly connected to each-other implying that at least within some portions of Compound V, interior access was at least somewhat restricted.

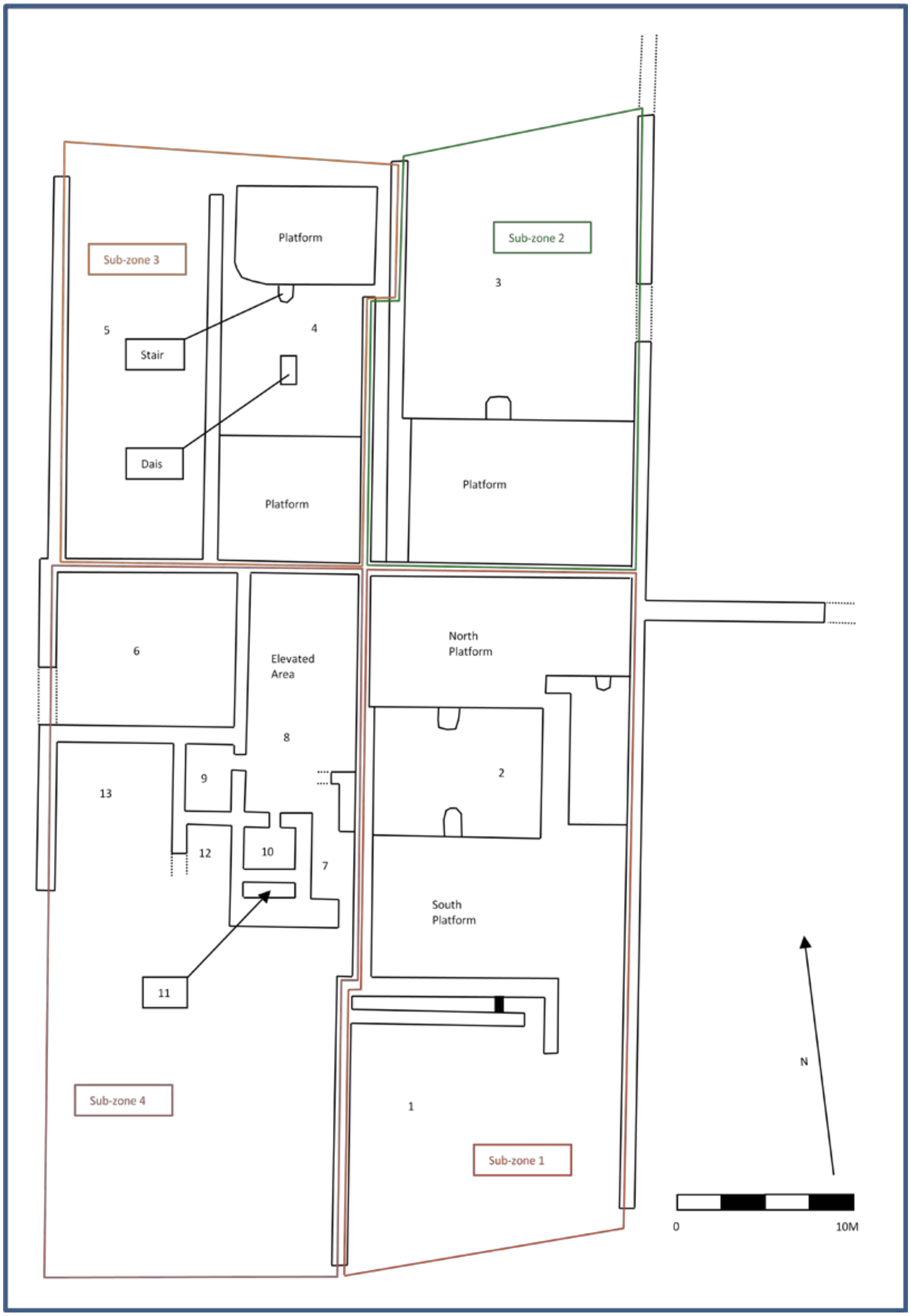
Sub-zone 1 is made up of rooms #1 and #2. These rooms are connected via a direct entry, but access is still somewhat restricted due to the presence of a dead-end hallway that extends far to the east. There is a plug in the eastern end of this hallway that restricts movement into this area. Room #2 contains two platforms, two sunken areas, (north and south), and three ramps. Two of the ramps are aligned and provide a means of moving (from south to north) from the southern platform, into the sunken area, and up onto the northern platform. The second sunken area is located in the east of room #2 and is serviced by only one ramp, which is attached to the northern platform.

Sub-zone 2 consists of a single room that contains a ramp and a large platform oriented north-south. The ramp is not centrally placed on the platform, but instead favors the west slightly. Room #3 appears to be open to the north, but it is possible that a north wall has been eroded.

Sub-zone 3 is made up of two rooms: #4 and #5. Room #4 contains a PDPS complex made up of a platform and an aligned stairway and dais that was initially discovered in 2005 (Warner 2006) and excavated in 2008 (Swenson et al. 2009). There are several noteworthy things related to the platform. 1) The southwest corner is purposefully rounded; 2) The stairway is not aligned with the platform's central axis, but instead favors the west; 3) this PDPS faces the south, whereas the PDSP in Compound III faces the north. In addition, there is adequate room on both the east and west sides of the north platform for a person to pass unimpeded into the central area of room 4. The southern portion of room #4 contains a square platform that does not seem to have an associated ramp. Destruction along the northern edge of this platform, however, makes it difficult to know for certain whether there was ever a ramp there, or not. In line with the stairway is a 1 x 2 meter "dais" made out of tapia. Room #5, located to the immediate west of room #4, appears to be open on its north end. As with room #3, however, this may be due to erosion activity, and not due to an architectural choice made by Jatanca's inhabitants.

Sub-zone 4 is made up of rooms #6 through #14. Room #6, which is isolated from the other rooms within this area, may have been accessed from its southwest corner, but this opening could also be the result of erosion activity. Rooms #7, # 8, #9, and #10 are connected, making this spatially one of the "deeper" areas mapped within Compound V (see below).   This room depth, along with the previously mentioned partitioning of the four zones, also hints at the degree to which internal access was restricted within this compound. To the south of Room #10 is Room #11, a small room that also lacks a formally defined entry. Rooms #12 and #13 appear to have been left open at their southern edge, but the general poor preservation of Compound V prevents certainty in this matter.

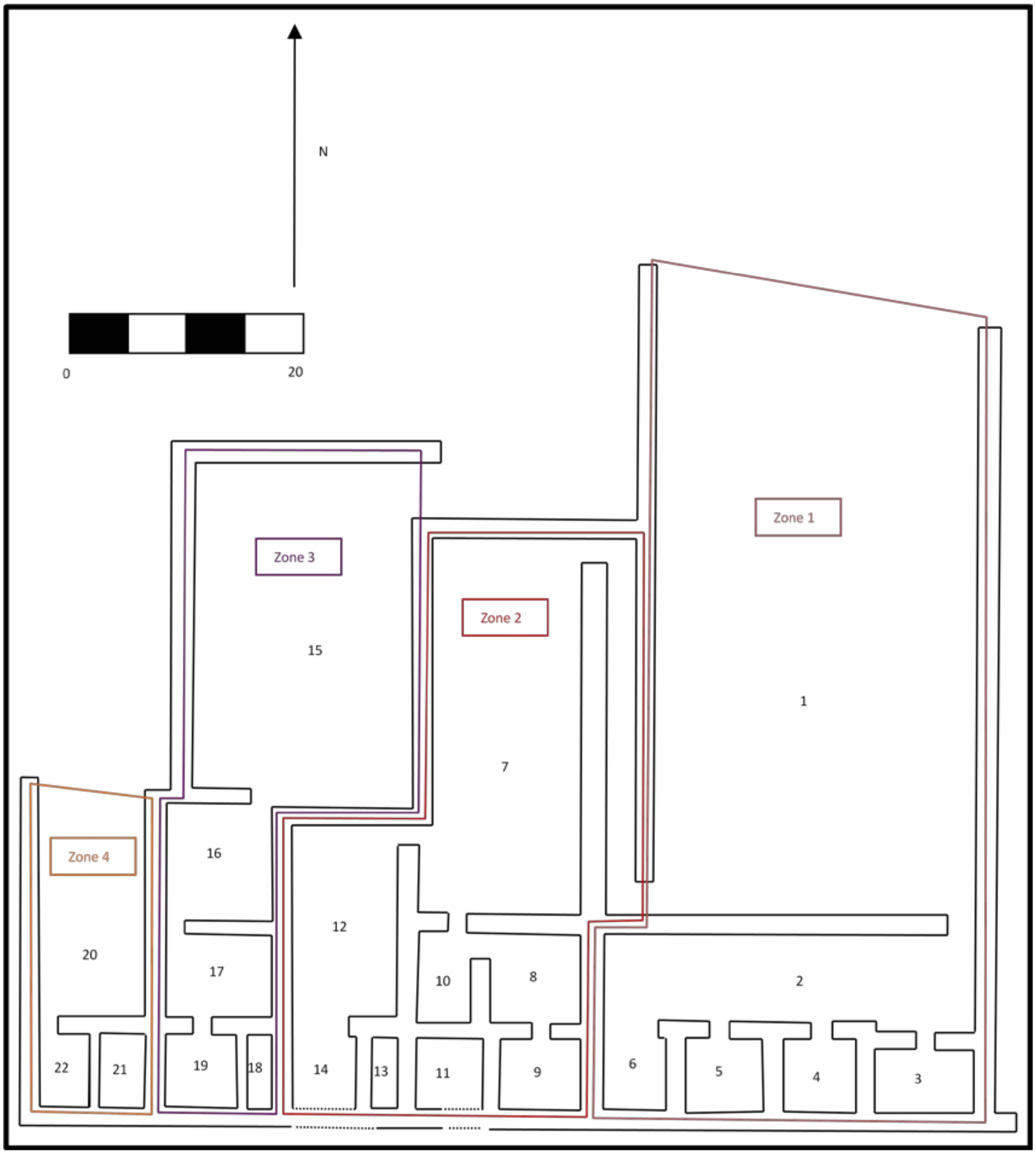
Figure 6.10 – Compound V/Zone C – Plan



Compound VI

Compound VI (Figure 6.11) is located to the northwest of the architectural core that makes up Jatanca – it is approximately 160 meters from the northwest corner of Compound IV. At 35 meters in length by 45 meters in width, it is the second-smallest of the Jatanca compounds. This is the only compound within Jatanca that measures less from north-to-south than from east-to-west. There are 22 rooms within this compound that are connected in any one of three ways: direct entry, baffled entry, and lengthy hallways. The north-south axis of Compound VI is oriented 15 degrees east of true north. It is of interest to note that the tapia walls in this compound are well-preserved and are significantly lower than the walls in the above compounds. The compound can be divided into four distinct zones as defined by access to the small rooms in the south, with the rooms in each sector being connected by a combination of straight and baffled entries.

Figure 6.11 – Compound VI – Plan



Zone 1 is made up of 6 rooms. Room 1 is open to the north and provides access into room 2 via a direct entry located against the east wall. Room 2 provides equal access into rooms 3-6. All four of these adjacent rooms are located along the southernmost edge of Compound VI; are relatively uniform in size (about 3 x 3meters); and have slightly restricted entries in the north.

Entry into **Zone 2** is made through a combination baffled entry and lengthy hallway that connects room 1 with room 7. Once in room 7, room 10 can be accessed via direct entry located in the south wall. There is a direct entry in the east wall that permits access into room 10, and subsequently room 8. Once in room 8, one has slightly restricted access into room 9, which, like rooms 3, 4, 5, and 6 is approximately 3 x 3 meters, and located along the south wall of the compound. To the south of room 10 is room 11, which at 3 x 1.5 meters is slightly smaller than the "typical" south room in Compound VI. There is no visible entry into this room. The west wall of room 7 has an entry that allows direct access into room 12, and then beyond into rooms 13 and 14. Room 13, like room 11, lacks a formal entry into its interior. Accessing these southern rooms may have been restricted. For example: If one wished to gain entry into room 9, it was necessary to first pass through rooms 1, 7, 10, and finally 8.

Zone 3 is constructed of 5 linearly linked rooms. Access into the interior of this zone is first made through the slightly baffled entry associated with the northeast corner of room 15. There is a direct entry located in the center of this room's south wall that allows one to pass into room 16. The southwest corner of room 16 has a direct entry that permits access into room 17. Finally, from this room, one can access both rooms 18 and 19. Room 18, like rooms 11 and 13, does not have a formal entry that permits interior access. Room 19, however, has a slightly restricted access that connects it to room 17. As with Room 13 in Sector B, Room 18 is smaller (3m x 1.5m) than the typical south room in Compound VI.

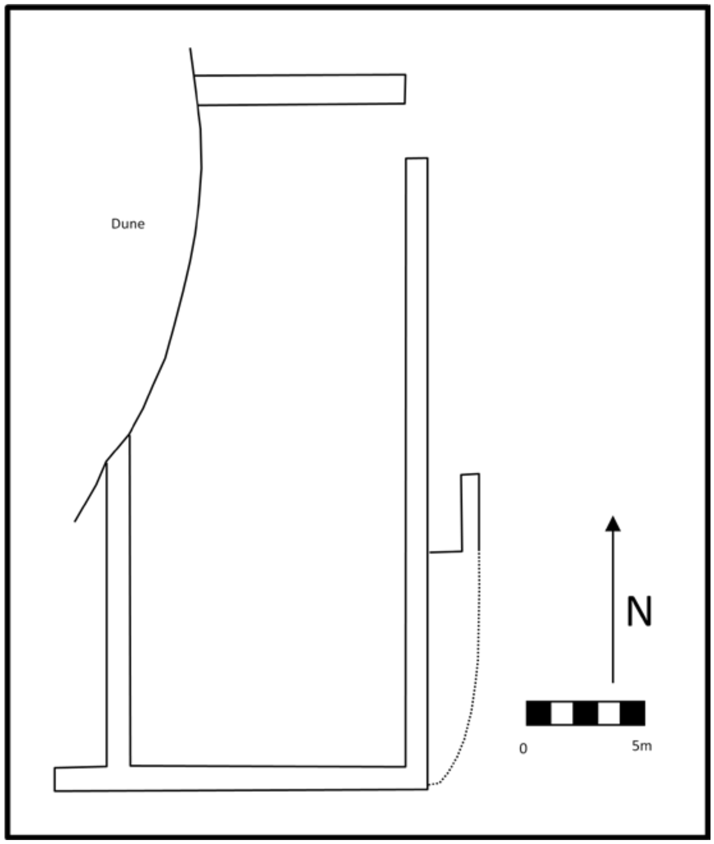
Zone 4 is Compound VI's smallest and least complex sector, and is made up of rooms 20, 21, and 22. Room 20 is open in the north and has a direct entry located in its southwest corner that permits access into room 22. Room 21 is also accessed via room 20, but like rooms 11, 13, and 18 this room lacks a visible entry into its interior.

This compound, with its row of U-Shaped rooms along the southern wall is somewhat reminiscent of the later *audiencias* associated with the Chimú – especially at Chan Chan (see Chapters #2 and #9). However, unlike *the audiencias*, the U-shaped structures within Compound VI are not associated with storerooms or niches so the analogy may be a bit strained. In fact, in many respects this structure is more like "Mixed Function Architecture" from Galindo (Bawden 1982). This analogy is discussed in detail at the beginning of Chapter 7.

Compound VII

Compound VII (Figure 6.12) is located just outside of the architectural core that makes up Jatanca as it is approximately 90 meters from the southwest corner of Compound IV. It is made of tapia and measures 28 x 14 meters making it the smallest of the Jatanca compounds. The north-south axis of Compound VII is oriented approximately 3 degrees east of true north. It is a simple structure made up primarily of a single open room that is accessed via a direct entry located within its northeast corner. The southeastern exterior of this compound has a short wall segment that forms an attached shallow room. The southernmost wall extends approximately 2.5 meters to the west and terminates. It does not appear that this termination point is the result of erosion.

Figure 6.12 – Compound VII - Plan



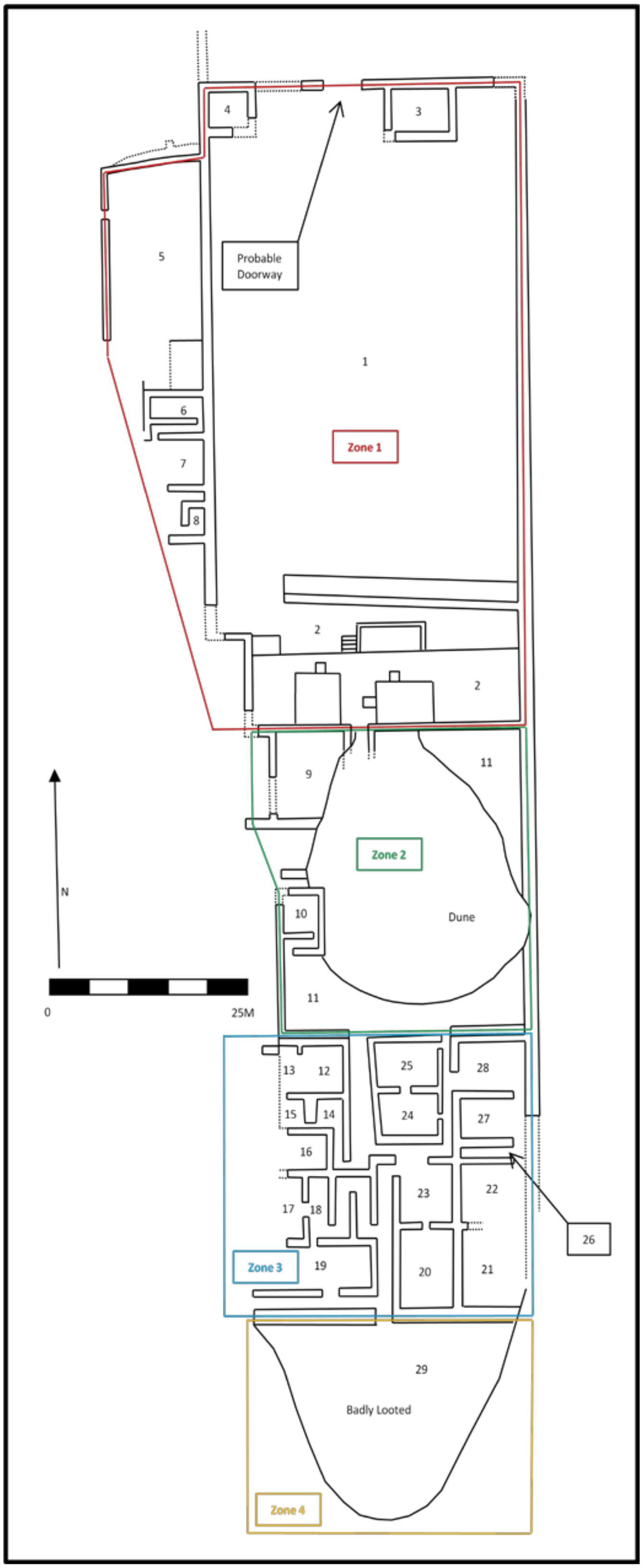
The Acropolis

The dimensions of the Acropolis (Figure 6.13) are approximately 160 x 45 meters. It is made up of approximately 23 rooms that are oriented along an axis that is about 12 degrees east of true north. Unfortunately, the presence of a large, permanent sand dune in the center of the structure and erosion along the western edge of the Acropolis prevent determining the exact number of rooms that make up this structure. It is interesting to note that the Acropolis is artificially elevated above the pampa. In the approximate north-south center, where the southern edge of the public PRPC begins, the Acropolis rests directly on the ground, but as one moves toward the south of the structure it begins to rise until it reaches a height approximately 9 meters above the surrounding pampa. This gradual change in elevation gives the Acropolis a wedge-like profile when viewed from either the east or west (Figure 6.9). The possible significance of this architectural anomaly is discussed briefly below, and again in Chapter 8.

Zone Identification

The Acropolis can be divided into four distinct zones based primarily upon an examination of wall alignments and access patterns. **Zone 1** is located in the northern portion of the compound and consists of the public PRPC Variant. As with Compound IV, a formal entry into the plaza (room #1) from the northern exterior could not be identified during mapping. It is possible, however, that one was located in the center of the north wall, but was subsequently eroded. Indeed, large quantities of tapia melt obscure the presence or absence of any kind of an architectural footer, making door identification equally difficult. In addition, there are two small rooms (#3 and #4) located in the north interior of this area for which a formal entry could not be identified. Both of these rooms are defined by relatively low walls and since they are slightly elevated above the level of room 8 (approximately 30cm), may have actually functioned as open platforms.

Figure 6.13 – The Acropolis – Plan



Along the western exterior wall of room 1 are five attached rooms (rooms 3-7), though it should be pointed out that defining the exterior architecture for this portion of the Acropolis was difficult due to erosion and tapia melt and there may have been more rooms that could not be identified based solely upon surface examination. Room 5 may contain a platform within its southeast corner. Access into room #6 is achieved via a baffled entry, while room #7 and room #8 are entered via direct entries. None of these rooms has a direct access into room #1.

Separating room #1 from room #2 is a low-lying wall that partially functions as a retaining wall, thereby elevating the surface of room #2 above the ground level of room #1. It is of interest to note that this retaining wall terminates before reaching the western wall, allowing relatively unimpeded access into room #2 via a direct entry, where there is a series of ramps, platforms, and a stairway (see below).

The southeast corner of room #2 contains conical adobe bricks that have been incorporated into the construction of the exterior wall (Ubbelohde-Doering 1966; Hecker and Hecker 1990). Rows of these bricks are generally oriented in the same direction (▲▲▲▲), are between 17 and 20cm across the base and 17 to 24cm from bottom to top, and mortared with tapia. Some brick wall segments contain bricks that deviate from this organizational scheme and appear to have been rather hastily placed into the wall. Therefore, it is also possible that some sections of conical adobes were dropped carelessly into wall forms along with tapia and compacted. As with the adobe bricks used in constructing the southwest exterior wall of Compound IV, the conical adobes used in the Acropolis were capped with a formal layer of tapia, in this case, about 60cm in depth. Unlike the surrounding tapia, these bricks are relatively free of inclusions such as ceramics, large rocks, and shell. This brick type typically dates in use to the Late Formative Period (Pozorski and Pozorski 1987; Ubbelohde-Doering 1966) and has important chronological implications and is discussed below in detail.

The type of access that connects zone 1 and **zone 2** cannot be identified at this point in time due to the presence of a large stationary dune and *zapote* tree[7] that occupy much of zone 2 and a portion of zone 1. Excavation in 2008 that was designed to clarify this access had to be called off due to the excessive amounts of loose sand that fell into the unit as it slowly advanced to the south. Nonetheless, there are at least three rooms within zone 2, which also marks the point at which the southern sector of the Acropolis begins to rise creating an elevated wedge-shaped profile. Room # 9 is located in the north of this zone and is partially obscured by the presence of the stationary dune located in the center of room 11, which is easily the largest room within this zone. However, the dune may also obscure the identification of any additional spatial partitioning within room #11. Room #10 is located in the western portion of zone 2 and is entered via a southern-facing baffled entry.

There are two preserved direct entrances into **zone 3**, which is made up of room #12 through room #28. These rooms are accessed via a combination of baffled entries, direct entries, and lengthy hallways. Unfortunately, poor preservation obscures the spatial patterning on both the east and west extremes of this zone. In general though, it appears as though access into the rooms on the west side of zone 3 was a bit more restricted than on the east as evidenced by the number of baffled vs. direct room entries. A number of burials were located within this zone as evidenced by the presence of human skeletal material and broken ceramics uncovered by *huaqueros* (see Chapter 5). Unfortunately, the exact location of the burials was impossible to determine due to the amount of recent surface disturbance.

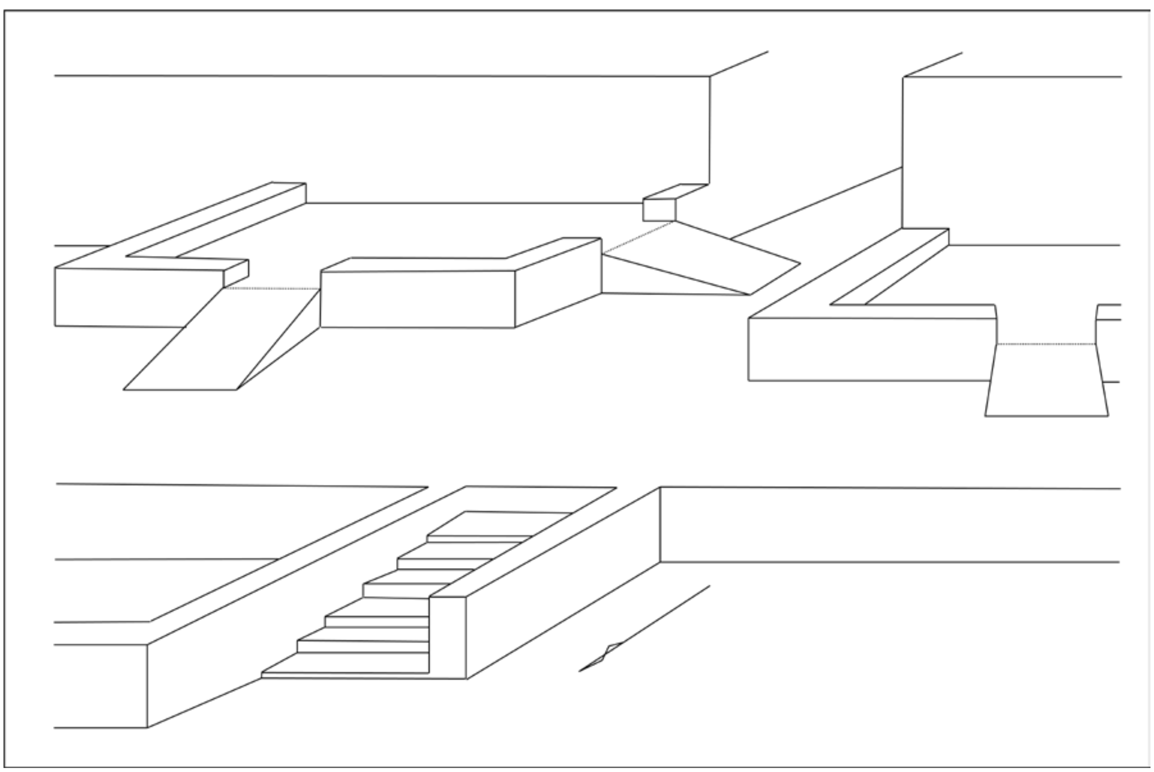
The southernmost portion of the Acropolis makes up **zone 4**. This is the most elevated portion of the structure and also the most poorly preserved due to both the ravages of erosion and the amount of *huaquero* activity which has uncovered copious amounts of human bone and ceramic material. There is a central stairway that links zone 3 and zone 4 that was previously excavated and published by Ubbelohde-Doering (1966).

[7] This tree and associated stationary sand dune have been in place for well-over 60 years as indicated by photos taken and published by Ubbelohde-Doering (1966).

The Plaza/Ramp/Platform Complexes

The southern portion of room #2 contains two unique ramp/platform complexes both of which rest upon a large platform that is accessed via either a stairway or a wise ramp (Figure 6.14). The complex in the southwest is made up of a ramp/platform feature that is oriented north-south. The exterior of the platform is outlined with a low wall. The second complex, located in the southeast is composed of a platform and two ramps – one of which is located on the north side of the platform, while the other is placed on the west side on an east-west axis. This ramp actually extends into the access into the interior of the Acropolis. As with its western counterpart, this platform is defined by a small wall that was constructed around the perimeter. Both of the PRPC complexes are elevated approximately one-meter above the adjacent plaza floor, providing an unobstructed view of proceedings that might have occurred within this zone.

Figure 6.14 – Isometric Drawing of PRPC Variant (not to scale)



Compound Patterns

The above descriptions indicate that within some architectural categories such as building orientation and entrance location, there is very little variation, while other categories, such as the organization of ramps and platforms had a much greater range of acceptable possibilities. Minimally, however, the predictable location and organization of elements such as the Primary PRPC and Secondary PRPC demonstrate the presence of a "template" – or at the very least a consistent mode within the range of potential variation – that was used to organize (especially internally) monumental architecture at Je-1023, especially with regard to Compounds I-IV and the Acropolis.

It is of no small interest to note that the redundant use of architectural features within monumental compounds also occurred at the Late Intermediate Period site of Chan Chan within the Moche Valley (Moseley and Day 1982; Moseley and Cordy-Collins 1990; see Chapter 2). Within the capital of the Chimor Empire, a series of ten compounds, or *ciudadelas*, were constructed and occupied by Chimú rulers during their reign, and were converted into mausoleums upon his death. The organization of the internal space and architecture features such as entrances, plazas, platforms, and ramps within the majority of the *ciudadelas* was remarkably similar, yet there were important variations as well, which permitted archaeologists to examine a variety of issues. Differences in compound layout (Day 1982), brick forms (Kolata 1982, 1990), and burial platform architecture (Conrad 1982) allowed archaeologists to determine that the compounds had been constructed and occupied sequentially, although the actual sequence is debatable (see Netherley 1990; Zuidema 1990). An examination of the amount of compound area devoted to storage space both within the capital and outlying regional centers permitted archaeologists to discuss the changes in the economic organization of the Chimú Empire and inter-valley expansion (Keatinge 1982, Keatinge and Conrad 1983; Kolata 1990; Mackey 1990). Finally, the identification of different classes of architecture within Chan Chan such as ciudadela, elite compounds, and SIAR permitted a detailed understanding of the social organization of space (Klymyshyn 1982; Topic 1982).

Identifying patterns of spatial and architectural organization within Jatanca's compounds provides insight into similar issues. Subtle distinctions in architectural form may have chronological implications not identifiable via radiocarbon dating. For example, do spatial and organizational data support the hypothesis that the Acropolis was built before the other major compounds? Did the compounds undergo stages of development and modification, or were they constructed all at once? Furthermore, the analysis of compound access patterns may illuminate the presence of social hierarchies within Jatanca's constituency, or shared concepts of spatial organization with other, later groups (see below). Examining compound spatial organization may also shed light upon the reasoning behind the architectural layout of complexes such as the Primary PRPC, Secondary PRPC, and PRPC Variants. For example, spatial organization within the PRPCs may be related to practical needs surrounding the staging of rituals and/or political events (see Chapter 7), or more abstract representations associated with sociopolitical organization (see Chapter 8), or a combination of the two. Finally, identifying the shared compound characteristics will be critical to the examination of the role of social memory in the development of urban monumental architecture discussed in Chapter 9 – a point at which this work once again revisits the Chimú site of Chan Chan. Therefore, as prelude to these themes, it is critical to group and discuss the patterns of architectural organization elucidated above so as to examine compound construction chronology, followed by access pattern analysis.

Shared Orientation

Based upon the location of the primary (or formal) point of compound entry, all of the structures within Jatanca's architectural core are oriented just east of north (Table 6.1) and within 11˚ of each-other (range = 4˚-15˚). If one were to eliminate Compound VII, which given its small size and simple interior organization when compared to Compounds I-VI might be justified, then the range is even tighter (8°-15°). The significance of this adherence to orientation may indicate several things about those responsible for the construction of Jatanca. Certainly, it indicates the presence of some form of centralized planning both in terms of the compound layout and the organization of the larger site (see Chapter 8). It terms of the chronological development of the site, however, the significance of the shared orientation is equivocal. While it could be interpreted as indicating that the compounds were built at the same approximate point in time, the shared orientation of structures is a feature found at many Andean sites both pre and post Jatanca such as Purulén (Alva 1986; see also Chapter 2), Pacatnamú (Donnan and Cock 1986, 1997; Hecker and Hecker 1985; see also below), and Chan Chan (Moseley and Mackey 1974; Moseley and Day 1982; see also Chapter 9). Considering the combination of wind and sand that plagues North Coast sites (see Chapter 2), it is also possible that the north south orientation of sites such as Jatanca and Chan Chan are the result of an attempt to mitigate their impact upon compound-based activities occurring within north plazas. Perhaps more significantly, the shared axis at Jatanca and other coastal sites could also be the result of a subtle adherence to a collective memory that suggests a "proper" building orientation based upon past environmental and/or social conditions (Connerton 1989), an idea that will be covered in detail in Chapter 9. Obviously, none of these explanations are necessarily mutually exclusive. There does not, however, appear to be any chronological or functional significance to the slight variation in axial alignment.

Table 6.1 - Compound Orientation Jatanca

	C-I	**C-II**	**C-III**	**C-IV**	**C-V**[8]	**C-VI**	**C-VII**	**Acropolis**
˚E of N	12˚	8˚	12˚	11˚	12˚	15˚	4˚	12˚

[8] This is an estimated measure based upon the assumption that Compound V, zones a, b, and c are all connected into a single, contiguous structure.

Compound Footprint

Examining the compound footprint may provide chronological insight into the compound construction sequence as all of the large compounds (Compounds I, II, III, IV, and the Acropolis)[9], exhibit the presence of a similar rectangular form "embedded" within their overall footprint. This rectangular form, or "Central Linear Core" (CLC) is composed of the Primary PRPC and a number of additional in-line rooms that line up to the south. For example, within Compound I the CLC is made up of rooms #1 through #23, in addition to room#72 and room #73. In Compound II, the Central Linear Core is composed of room #1 through room #12 (and perhaps rooms #15, #16, and #17 as well). In Compound IV, the CLC is made up of rooms #1, #2, #5 through #8, and the large eroded area that makes up the southeast corner of the compound. The exterior footprint of Compound III and the Acropolis is that of a long rectangle since they have no annex - all of their respective ancillary rooms and hallways line-up behind the primary PRPC, forming the CLC. Therefore, based upon interior wall patterns, all five buildings have numerous small rooms lined up behind the primary PRPC forming a central linear core.

What differentiates Compounds I, II, and IV from the Acropolis and Compound III is the presence of a sizeable western "annex" that is directly connected to the CLC. The presence or absence of the annex may indicate that the compounds were differentiated in terms of their function, i.e. some were used for storage or processing of foodstuffs, while others were not (see Chapter 7). Chronologically, it is possible that the CLCs were constructed first with the annexes added at a later date. In other words, initially the site was composed primarily of long rectilinear compounds and the annexes were later additions – perhaps in response to changing economic needs (see Chapter 7). If this was the case, it might also explain why Compound III does not have an annex; perhaps there was not enough room to retrofit one due to the nearby presence of Compound IV to the immediate west.

[9] Compound V is excluded from this portion of the discussion due to its poor preservation.

It is also possible to use the presence of a CLC and annex to argue that Zone 5 within Compound I was the final major construction event underwent by this structure. For example, in the case of Compounds II and IV, the annex is restricted to the southwest quadrant of the Central Linear Core,[10] which results in their unique replicated form (see Figure 6.1). If one ignores Zone 5 in Compound I, the resulting shape is much like that of Compounds II and IV: a Central Linear Core, with an annex located in the southwest quadrant. Therefore, it is possible that Zone 5 represents a final construction phase in the history of Compound I. In this scenario, Compound I (along with perhaps Compounds II-IV) was first constructed as a central Linear Core, had an annex attached to the southwest quadrant (along with perhaps Compounds II and IV), and realized a final major addition with the completion of Zone 5. To sum, based upon the presence/absence/modification of the CLC and annexes, the site wide construction of Jatanca may have been as follows:

1. Acropolis was constructed first based upon CLC design template (also supported by the presence of conical adobe bricks)
2. Compounds I-IV constructed also based upon CLC template (also supported by c14 dates and presence of quadrilateral bricks in Compound IV)
3. Initial southwest annexes added to Compounds I, II, and IV. An annex cannot be added to Compound III due to the already established presence of Compound IV.
4. Zone 5 added to CLC and southwest annex of Compound I.

Unfortunately, this pattern was not discovered until after carbon for C14 dating had been sent for processing. As a result, carbon samples were not selected that would enable this sequence to be tested with any degree of certainty as most of them came from the CLC. Future seasons at Jatanca will be devoted to examining the compound-specific construction sequence of the compounds via radiocarbon dating.

[10] Based on images viewed with Google Earth, it appears as though Compound V has an attached annex in the southwest.

Presence of a PRPCs and PSDPs

All of the major compounds have some combination of a primary PRPC, secondary PRPC, a PRPC variant, and/or a PDSP complex. The position of these complexes relative to the compound and their interior and exterior form is remarkably consistent. The Primary PRPC is always oriented north-south, located in the northernmost portion of the compound and served as a primary point of internal entry – especially in the case of Compounds II, III, and IV[11] (Figure 6.15). The plaza is a large open space that is always located in the north and the ramp/platform room is in the south. Generally, there is a single, direct exterior entry into room #1 (with the possible, but unlikely exception of Compounds I and IV – see above) that is located in the center of the north wall. The ramp/platform room is always elevated about one-meter above the abutting plaza and is accessed via a ramp. A combination inset/projecting ramp provides access between the two rooms.

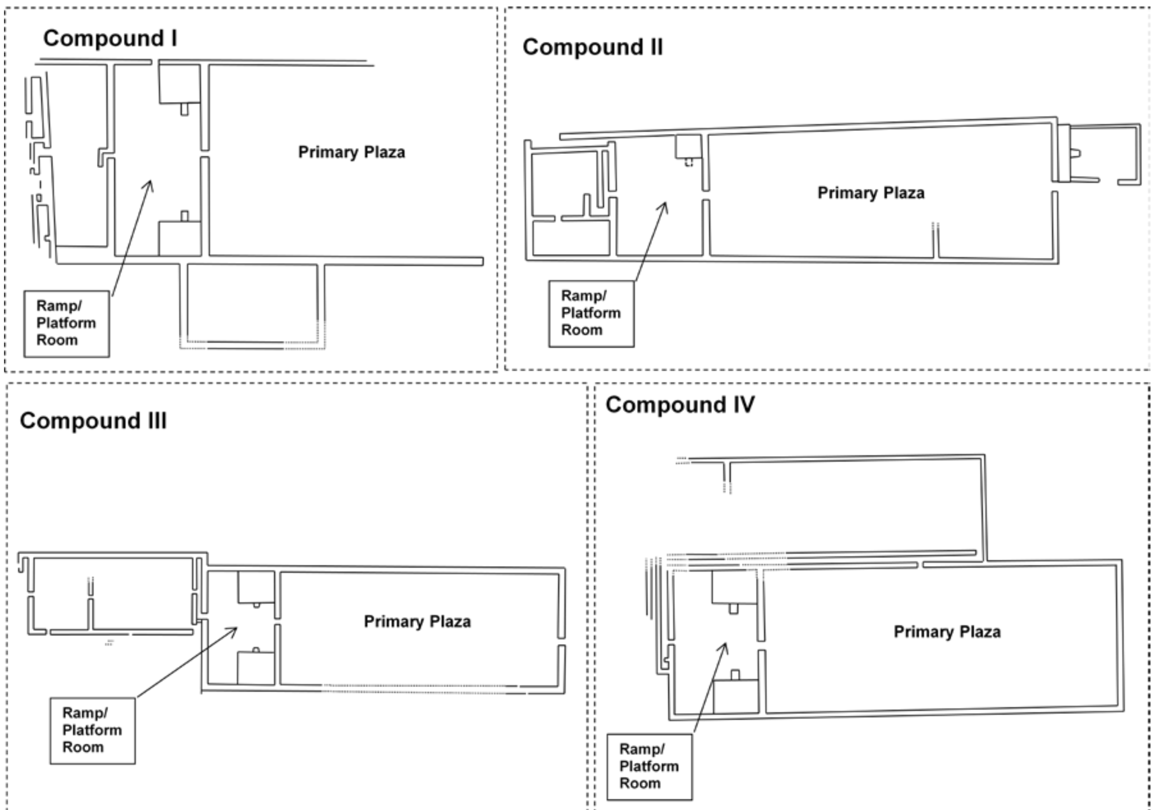
Room #2 is no less standardized in its form. There are always two mirror image ramp/platform features found within this room that are always found in the same location: one is in the northwest corner and one in the northeast. The ramps associated with these platforms are, for the most part, centrally located and are oriented east-west. The platforms are never particularly high – usually less than 50cm. The southern wall of this room is always at least two-meters in height and has a centrally located door that permits access into areas of the compound beyond the PRPC. This door is always baffled so as to obscure activities occurring behind it to those within the PRPC.

Combined, the two rooms that make up the PRPC are always the largest within the compound, with room #1 making up the vast bulk of the area. The PRPC is surrounded by thick, high walls (at least two-meters) that step down approximately one-meter at the point where the ramp/platform room (room #2) meets the plaza (room #1) so as to maintain the same floor-to-wall height relationship of approximately two-

[11] While technically the Acropolis has a PRPC Variant within its northernmost sector based upon the organization and orientation of the ramps and platforms, it probably served a similar function as the Primary PRPC of Compounds I-IV (see Chapter 7).

meters[12] (Figure 6.16). These walls obscure activity within the PRPC to those located on the exterior. In the case of Compounds II, III, and IV the perimeter of the PRPC is slightly trapezoidal in shape with the narrow end located along the southern periphery of room #2.

Figure 6.15 – Primary PRPC Compounds I, II, III, and IV

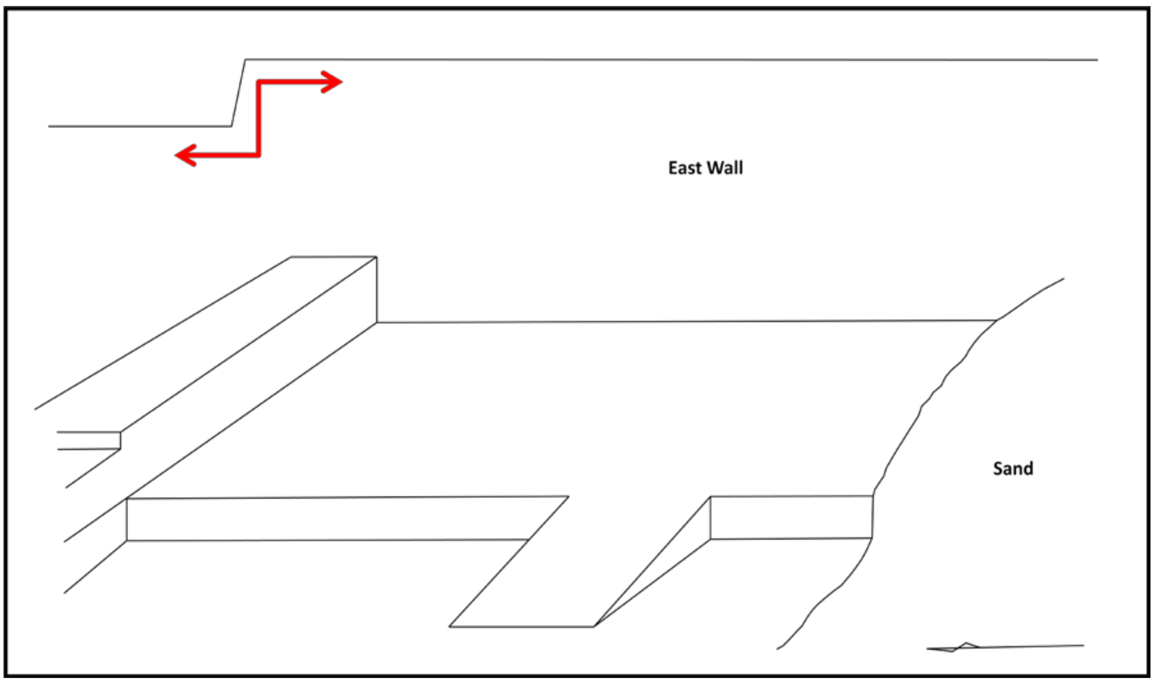


To a person located in the plaza, there are a number of pronounced visual effects that result from the spatial distribution of features within the PRPC: 1) there is a feeling of depth created by the clustered placement of features such as entrances platforms, and ramps within the otherwise unobstructed, sparse interior; 2) There is an north-south axial alignment created by the central location of features such as the central north doorway, the ramp that connects room #1 and room #2, and the baffled entry in the south wall of room #2; 3) there is a bilateral effect that is created by the

[12] This same wall pattern has also been observed at *Cajamarquilla* (Personal observation 2008).

north-south axial alignment in conjunction with the location of the two ramp/platform features, and the high north-south walls on either side; 4) a accentuated feeling of elevational change is created by the surrounding high walls which reduce outside topographic information and force one's attention toward the obvious elevation of room #2, its associated platforms, and the high, southern wall. The impact of these visual cues results in an experiential perspective that will be discussed at length in Chapter 7.

Figure 6.16 – Change in PRPC Wall Elevation



The Secondary PRPCs are found within Compounds III and IV and in almost every respect such as entry, orientation, and perimeter wall elevation, they are smaller versions of the Primary PRPC. In both cases, the secondary PRPC is located to the west of the central axis created by the Primary PRPC. This complex can be reached only after first passing through the Primary PRPC, and in turn must also be passed through in order to reach additional rooms deeper within the compounds interior (see also below).

The PRPC Variants take many forms and orientations and are located throughout all of the major compounds with the exception of Compound IV. For example, Compounds II and III both have examples of PRPC Variants located adjacent to the main north entry that take the same general form: a ramp/platform that is oriented north-south (CII = 1 PRPC Variant; Compound III = 2 PRPC Variants). Compound I also has a similar PRPC variant, but in this case, it is located within a relatively inaccessible portion of the compound (interior of Zone 1). Compound V has numerous examples of PRPC Variants mainly consisting of single ramp/platform combinations that are oriented either north-south or east-west.[13] It is difficult to say much regarding the PRPC Variants found within this compound due to its generally poor state of preservation. Perhaps the most important example of this complex is located within the north end of the Acropolis where instead of a PRPC there is a large PRPC Variant as the south end of room #2 contains numerous examples of ramp/platform and stair/platform combinations. The complex is made up of two conjoined rooms that are oriented along a north-south axis. The room in the south (room #2) is elevated above the room to the north (room #1). What is of special interest is that the difference in height between the two rooms can be negotiated by either a stair, or a ramp. There are two additional ramp/platform features on the summit of the lower platform. The combination to the east is made up of a rectilinear platform and two ramps: one ramp extends to the south, while the other ramp extends to the west and partially blocks that entryway that connects room 2 with room 11. The ramp/platform combination on the west is composed of a single rectilinear platform and ramp that extends to the north. Despite its unique configuration when compared to the PRPC Complex, this complex probably served the same general purpose as did the primary PRPCs (see Chapter 7).

[13] Within Zone 5 of Compound I is the potential presence of as many as three additional PRPC variants. Room pairs #67 and #71, #58 and #61, and #59 and #60 conform to the general shape and dimensions of PRPCs. In all cases, the southern room of these pairs (rooms #60, #61, and #70) is elevated above the floor level of their associated room in the north. Room #43 may constitute an additional example of a private PRPC as a possible dividing wall located in the southern third of this room was identified in 2008. This possibility is scheduled to be tested during the 2009 field season.

Compound III and V contain an example of a PDSP. In some respects, the PDSP is similar to the PRPC. Both are made up of two conjoined rooms that are oriented along a north-south axis. Differences in elevation are also emphasized as one of the rooms is made up of a platform. There are important differences as well. The PDSP is much smaller than either the primary or secondary PRPC. In addition, rather than using a centrally-located ramp as means of negotiating the elevational difference between rooms, a small stairway is employed. Finally, there is at least one, low-lying rectilinear daises located within the northern room along the central axis. There are two critical differences between the PDSPs found to date: 1) there are two daises in Compound III's PDSP, and only one within Compound V's PDSP; 2) the orientation of Compound III's PDSP is to the north, whereas Compound V's PDSP is oriented to the south. This is perhaps the only example of an architectural complex within Jatanca that has a southern orientation, with the possible exception of Compound V/Sub-Zone 1.[14]

Two PDPS Complexes have been identified; one within Compound III and the other within Compound V. Both of these complexes are quite similar, with the main difference being that the PDPS Complex within Compound III has two dais-like features, while the PDSP associated with Compound V has only one. While it cannot be stated with certainty due to Compound V's generally poor preservation, it appears as though both of these complexes are located within relatively inaccessible areas of their respective compound.

Unlike the study of stylistic changes in architectural complexes such as the mortuary mounds within most of Chan Chan's compounds which resulted in a refined understanding of *ciudadela* chronology (Conrad 1982), an examination of Jatanca's PRPCs and PDSP Complexes provides little in the way of enhanced understanding of architectural chronology. A few tentative statements, however, can be made based upon the presence and/or absence of the above complexes:

[14] It should be noted, however, that it is possible that there was an additional southern ramp within this room that has subsequently become eroded. The platform structure (or wall) that defines the southern border of this complex is in very poor condition.

1. It is possible that the presence of a PRPC Variant within the northernmost section of the Acropolis instead of a Primary PRPC as is the case within Compounds I-IV further indicates the antiquity of this structure. In this scenario, the Primary PRPCs and Secondary PRPCs of the later compounds are derivative of the large PRPC Variant associated with the Acropolis.
2. Given the presence within Compound V of numerous PRPC variants similar in form but smaller in scale to that found within the Acropolis, it is possible that the construction of this compound may antedate Compounds I-IV, where the Primary and Secondary PRPC form received greater emphasis. However, the presence of a similar PDSP Complex within Compound V and Compound III may argue against this hypothesis.
3. That all of the Primary PRPC's are alike in their composition might substantiate the hypothesis that Compounds I-IV were all constructed during the same approximate point in time. However the presence of the Secondary PRPCs within the CRC of Compound III and the annex of Compound IV may confound this scenario somewhat.

Compound Patterns and Chronology: Conclusion

The compounds that make up Jatanca have a highly formalized appearance in terms of how space and architecture was partitioned: they are all aligned on a north-south axis, rectilinear in form, and have numerous multi-room architectural complexes that are internally organized in much the same manner. When there is an annex, it is always located to the west of the central linear core. All primary PRPCs are located in the northernmost portion of the compound. Secondary PRPCs are always smaller and located further within the interior of the compound, as is the PDSP within Compound III. By combining the above discussed architectural subtleties with the radiocarbon dates (see Chapter 5) and data related to construction materials (see Chapter 5), a somewhat refined understanding of Je-1023's construction sequence comes to light.

The Acropolis was the first structure built within Jatanca's urban core based upon radiocarbon dates, the presence of conical adobes, and the use of a PRPC Variant within the north plaza as opposed to a PRPC Complex. The fact that this is the only elevated structure within the group may also hint at its antiquity (see Chapter 9). It is possible that Compound V was built and occupied contemporaneously with, or just after the Acropolis based upon the presence of a number of similar PRPC Variants and the apparent lack of a Primary PRPC Complex. The poor state of preservation exhibited by this compound when compared to Compounds I-IV may also indicate that it is slightly older than those to the west. Compounds I-IV appear to have been constructed at the same approximate point in time based upon the presence of the Primary PRPC, preservation, and radiocarbon dates (see Chapter 5). It is possible that all four of these buildings were initially conceived and built as long rectilinear structures based upon the presence of the CLC – which has a form similar to that of the earlier Acropolis. Later, annexes were added on to the southwest corner of Compounds I, II, and IV, resulting in a similar footprint for all three of these buildings. A final annex was added to the northwest corner of Compound I at some point before final abandonment of the site. Finally, the rectilinear bricks within the west wall of Compound IV (see Chapter 5) may indicate that at least this portion of the annex was also the result of a relatively late construction episode, necessitated perhaps by damage created due to an ENSO event. How this wall compares with the addition of the northwest annex in Compound I is currently unknown as radiocarbon dates from the CLC of Compounds I, II, III, and IV indicate that at the very least the CLC of all of the compounds were constructed at the same approximate point in time. Finally, ceramic data (see Chapter 4) indicate that despite its antiquity, the Acropolis continued to be used throughout the concurrent occupation of Compounds I-IV.

Based upon the above, it would appear that there are at least two major construction episodes within the site: the Acropolis (and likely Compound V) followed by Compounds I-IV (and perhaps Compound V). Therefore, it seems unlikely that the Major Compounds were built sequentially as was the case within Chan Chan (Day 1982;

Kolata 1990). Therefore, it seems doubtful that they were used in an analogous manner; i.e. as a ruling "palace" that was converted into a mausoleum upon the death of the leader. However, while the chronology of construction may not indicate the presence of sequential rulers at Je-1023, other forms of social organization such as lineage units based upon the unique Andean system of the *ayllu* can be identified (see Chapter 8). In addition, access pattern analysis may argue for the presence of institutionalized ranking among Je-1023's constituency. It is at this point that we need to undertake a formal analysis of access patterns which will result in not only illuminating the issue of social hierarchy, but will provide a much-needed foundation for Chapters 7 (compound function and ritual), 8 (sociopolitical organization), and 9 (social memory and architectural mimesis).

Compound Access Patterns, Architecture, and Archaeological Interpretation

Access pattern analysis has been used by a number of archaeologists to identify the presence of social hierarchies. At the Preceramic site of Aspero, within the *Huaca de los Idolos*, Feldman (1985, 1987; see also Chapter2) argued that the presence of restricted, or "graded" access patterns in conjunction with increasing "architectural ornamentation" reflected emerging class stratification. Specifically, Feldman argued that the pattern of graded access indicated the presence of nested levels of "ceremonial space open to selectively more and more restricted groups of people" (1985:11). Simply put, an Individual that was able to access the more restricted areas of the huaca, enjoyed greater status than one who was not. Feldman (1985:13) takes this idea of access/status/and control a step further and states that, "The pattern of restricted access seen in the *Huaca de los Idolos* can be interpreted as further evidence of differential access to and control of ceremonial/religious activity by a small group of people."

Feldman is not alone in arguing that there is a connection between restricted patterns of architectural access and the presence of social differentiation. Based upon a sequential combination of redundant architectural elements including decreasing plaza size, decreasing internal access, increasing room elevation, and changes in architectural ornamentation, Tom Pozorski (1980, 1982) has argued that the site of Huaca de los Reyes was socially organized in a "ranked status system" (see also Chapter 2). As with Feldman, Pozorski equates restricted architectural access with a concurrent increase in the range of social status. He states (1982: 251): "Restricted entry is strongly indicative of status differences. If this were not the desired effect, then wider, more accessible passageways would have been built for easier traffic flow." Pozorski argues that the three sequentially ordered plazas at Huaca de los Reyes indicate the presence of a "three-rank system" of social organization. In this scenario, the large, exterior plaza that also served as a formal entry, accommodated the majority of the population during ritual/ceremonial events; the smaller middle plaza may have been used (or accessed) by a more restricted class of artisans and/or participants in a feline cult; while the smallest, innermost plaza was the locus of activities for only the corporate labor leaders (Pozorski 1982, 1985).

In a similar vein, at the Late Moche site of Galindo, Garth Bawden (1982,1996, and 2001) determined that the presence of restricted access patterns at two different scales of analysis – the site and the *cercadura* architecture (but see also Topic and Topic 1985) – indicated that there were significant class differences at this important upper Lower Valley site. For example, at the level of the site, Bawden argues that Hillside B and C storage were used and controlled by the ruling faction based upon the presence of formal architectural complexes adjacent to limited points of access. When considering the architecture, Bawden (1982) argued that the massive, high-walled *cercaduras* with their restricted point of entry also indicate the presence of an elite faction that held sway over a less privileged class.

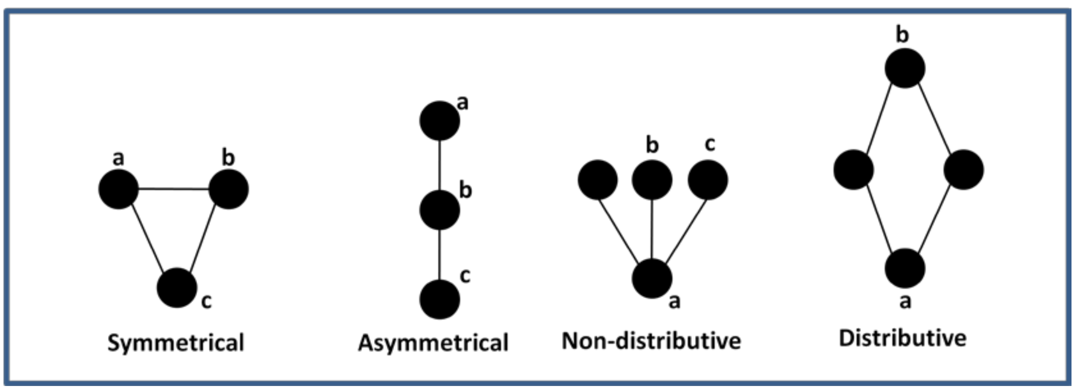
To all of the above scholars, differential access associated especially with monumental buildings equals the presence of differential social status among the constituency. Identifying differential access at the above sites was accomplished through the implementation of a number of analytical tools such as gamma analysis, beta analysis, and route maps and can be used at Jatanca as well (Hillier and Hansen

1984; Moore 1996). For instance, access patterns within Jatanca's large compounds can be represented schematically via gamma mapping which uses dots to portray rooms, or "vertices," and lines to represent inter-room access points, or "edges" (Hilliard and Hanson 1984; Moore 1996). These graphic representations enable the discovery of patterns that are often not necessarily obvious when examining an architectural plan. According to Moore (1996:184-185), gamma maps have three major properties:

1. Ignore room size and instead focus upon access patterns
2. Provide a depth value for each room that can be used for comparative purposes
3. Assume an overall configuration that provides information on a structure's "restrictedness."

Properties #2 and #3 are of special importance to the analysis within this section of the chapter. In the case of property #2, the depth of specific rooms within different compounds, and the depth of the compounds themselves can be compared and assessed for differences in relative ease of access. This may provide information as to what types of rooms were more accessible than others, and if they are consistently associated with any visible features. With regard to Moore's third property, the overall access configuration can be established so as to create a generalized view of internal access for each compound that can be used for comparative purposes (see Hillier and Hanson 1984: 184-185). According to Hillier and Hanson (1984; see also Moore 1996), the internal access patterns between the rooms of a given structure can be reduced to four primary conditions via the application of two nominal variables: symmetry and distributiveness (Figure 6.17). Symmetry is the situation where the relationship of variables *a* to *b* is the same as the relationship of *b* to *a* (Hillier and Hanson 1984). This also holds true if a third variable, is introduced into the relationship of *a* to *b*. In other words, the relationship between *a* and *c* and, *b* and *c* is also symmetrical. Therefore, in gamma analysis the term "symmetrical" describes a condition where the access to one given room is not controlled by another immediately adjacent room. Asymmetry exists when the relationship between *a* and *b* is not the same with respect to c (Hillier and Hanson 1984). In the case illustrated below, the relationship between *a* and *b* is not the same relative to *c*: If one is in *a*, they must pass through *b* in order to reach *c*. If one is in *b*, however, they do not have to pass through *a* in order to reach *c*. A distributed relationship is one where there are multiple non-intersecting routes between *a* and *b*. In the diagram below, one can get from *b* to *a* through either one of two potential routes. If there is only one way in which to travel from *a* to *b*, then the route is said to be non-distributive (Hilliard and Hanson 1984). In this case, travel from *a* to *b* can be accomplished in only one way, despite the presence of two alternate routes. Therefore, in gamma analysis the term "distributed" is used to indicate a condition where there is more than one way to access a given room, including passing through a third room.

Figure 6.17 - Qualitative Properties of Access Patterns (Hillier and Hanson 1984)



The above room-to-room patterns combine to make gamma plots that reflect the overall pattern of access within any given structure. There are three key patterns that are of importance to understanding the meaning of the internal access patterning of the Jatanca compounds. "Ringiness" is a situation where a structure is made up of a large number of interconnected rooms resulting in a "ring-like" pattern. These are typically the product of buildings that have a large number of rooms that are linked in a symmetrical and distributive manner, implying a high degree of internal openness and access (Hillier and Hanson 1984; Moore 1996). Structures that produce graphs that are both asymmetric and non-distributed are described as "tree-like" (Hilliard and Hanson 1984; Moore 1996). This pattern indicates that rooms are linked via combinations of asymmetrical and non-distributive links. This creates architectural depth and ultimately rooms that are relatively inaccessible when compared to those that are linked in a ring-like manner. "Chain-like" patterns are those that exhibit a high number of sequential asymmetrical links. Rooms that are linked in this way emphasize architectural depth and relatively inaccessibility as each room in the link potentially controls access into its adjacent room, and there is little choice in how one travels from one point in the chain to another.

These three broad patterns, "ring-like," "tree-like," and "chain-like," that are derived from the qualitative properties of access patterns defined by Hilliard and Hanson (1984) can be used to interpret the form and relative restrictedness of Jatanca's compounds. For example, if the compounds are relatively "open," they would display repeating patterns of symmetrical and distributive room links resulting in an overall pattern that is "ring-like." The presence of this pattern would fail to identify the possible presence of a hierarchically organized system of social differentiation. If gamma analysis of the compounds reveals redundant patterns of asymmetrical non-distributive access patterns, this would indicate that access was discouraged and that they were relatively "closed." In this case, we would not be able to reject the possibility that there was a hierarchically organized system of social identification at work within Jatanca.

Compound I

Given the size and complexity of Compound I (Figure 6.18) when compared to the other major compounds within Jatanca's architectural core, it is of little surprise that this compound's gamma analysis results in a fairly complex chart that must be carefully assessed in terms of its internal access patterns – especially given the presence of its multiple entrances and multiple zones that exhibit ring-like, tree-like, and chain-like patterns of access (Figure 6.66). Indeed, unlike Compounds II, III, IV and even the

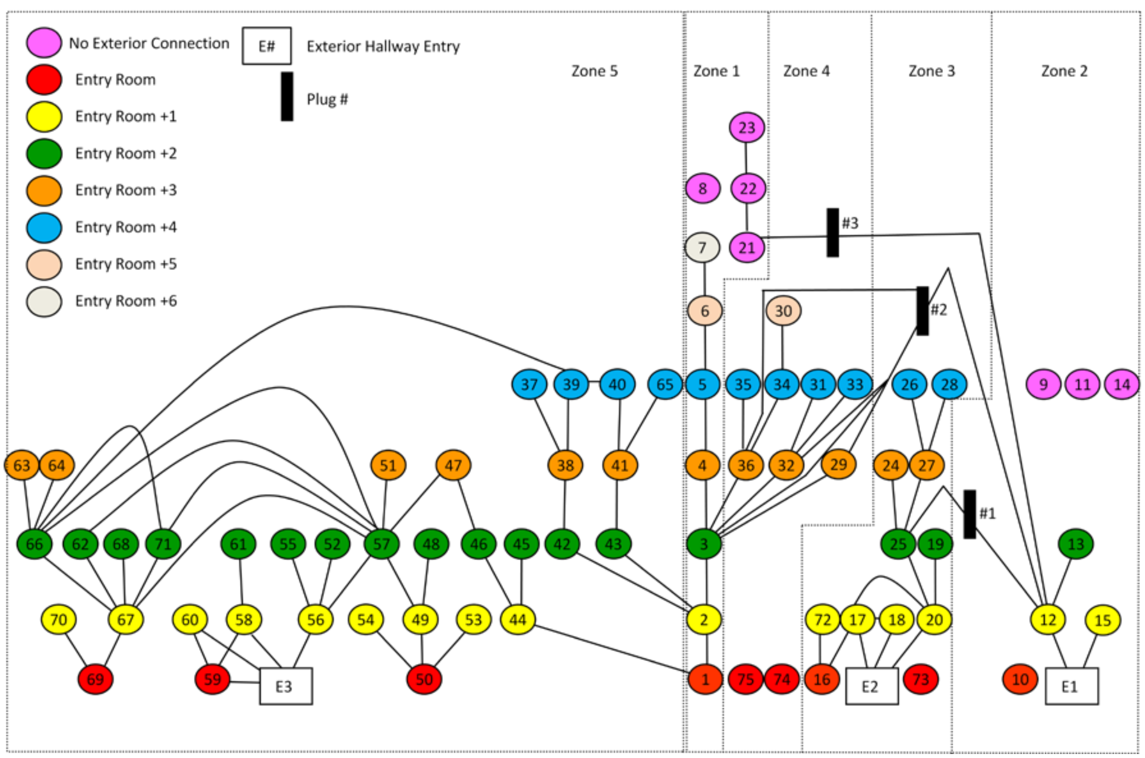
Acropolis (see below), Compound I does not have a single, easily identifiable pattern that characterizes its internal connectedness. For example, the form of **zone 1** is that of a series of asymmetrical connections giving it a linear - or chain-like - form that emphasizes the depth of this series of rooms. It is important to remember that there is a series of baffled entries (n= 3) and the ramp/platform room between room 1 and room 7 that further emphasize the depth and private nature of this area.[15] In fact, room #7 is seven rooms deep, making it the “deepest” or most difficult to access room within Compound I as measured by this form of analysis. Another aspect of room access that underscores the inaccessible nature of this zone are the rooms that comprise the PRPC Variant (21, 22, and 23) that are not directly accessible via an entryway due to the presence of a plug. At the level of the compound, zone 1 can also be viewed as having a non-distributive quality as well since one must first pass though rooms 1, 2, and 3 in order to reach non-distributive zone4 (see below). Zone 5 can also be accessed from zone 1 via rooms #1 and #2. Therefore, in addition to having a chain-like, deep room configuration, zone 1 is also a key means of accessing additional zones within Compound I.

Understanding the layout of **zone 2** is hampered by erosion that has partially destroyed some of the walls along the eastern edge. However, it is clear from what can be identified that the access patterns associated with **zone 2** differ greatly from those within zone 1. To begin with, there are several rooms (9, 19, and 14) that are not connected to the exterior via any identified formal pathway. Room #14 was excavated in 2005 to a depth in excess of 1.5 meters and no doorway was located (see Chapter 5). With regard to the few rooms that are connected to the exterior this zone has a weakly-defined non-distributive, asymmetrical layout. What is most intriguing about zone 2 is

[15] Rooms 4, 5, and 6 were cleared during the 2008 field season. Numerous postholes were found in rooms 4 and 5 which clearly indicated they had been used to support a roof made of perishable materials (Swenson, Chiguala, and Warner 2009). Of perhaps greatest importance was a grouping (n=10) of small, rounded, “mushroom-like” mounds that had been made by burning organic material within ceramic vessels and dumped upside down, leaving them in place until the burning had extinguished. The burned organic residue was black, dense, left an oily film on one’s hands when touched and maintained the internal form of the vessel to near-perfection. While the significance of the event that created this ecofacts is not understood particularly well, the contents of the organic matter might indicate that they were linked to some kind of ritual activity (see also Vasquez and Tham 2008).

that at one time it was directly linked to zone 1, zone 3, and zone 4 via two lengthy hallways. At some point after the initial construction of Compound I, Zone 2 was closed off from these other zones by plugs #1, #2, and #3, which greatly reduced both the complexity and depth of zone 2, in addition to the ease with which one could gain access to these additional zones. Indeed, after the plugs were put in place, zones 1 and 4 could only be accessed after first passing through the Primary PRPC, which greatly reduced the overall access into the compound. Therefore, before the construction of the plugs, this zone had a much greater asymmetrical, tree-like form, which included access into otherwise isolated rooms 21, 22, and 23. When the pre-plug linkage into zone 3 via room 12 to 27 is factored in, zone 2 would also have proved access into the somewhat asymmetrical southern end of the compound as well.

Figure 6.18 – Gamma Chart Compound I



Once plug #1 was put in place, **zone 3** could only be accessed through an entrance that served multiple rooms (E2) located in the eastern wall. In addition, the plug isolated this zone from the rest of the compound (see also below). Determining the access pattern within this sector is difficult as many of these rooms have considerable levels of sand accumulated within their interior which makes the identification of low-lying walls all but impossible. Furthermore, due to the size of these rooms – among the largest in Compound I - excavation during the 2005 field season was not practical, which further hindered the ability to locate and map any additional room partitioning. However, based upon what is visible, it appears as though these rooms are generally organized asymmetrically in a chain-like pattern with numerous shallow branches, and a maximum room depth of 5 from the hallway entrance.

Zone 4 is located within Compound I's most private space. The only way this area can be accessed is to first pass through the Primary PRPC, followed by a single entry within the west wall of room #3. Therefore, access into this zone is partially mediated by using space from another zone. All of the rooms within this zone are at least 3 rooms removed from the compound entry. Four additional rooms are 4 rooms removed from the entry, with a single room positioned 5 rooms from the entry.

The interior pattern of this zone is asymmetrical and somewhat tree-like in terms of its overall pattern of access. Quite a bit of excavation has taken place within this zone. In 2005 unit Compound I/Unit #1 uncovered a small domestic area that contained tapia-made features such as a formal deposito, and elevated bench within room #33 (See Chapter 5; Warner 2006). In 2008, additional excavations in the same room revealed the presence of a large platform to the south of the domestic structure along with a series of postholes that indicated the former presence of a roof made of perishable materials (Swenson et al. 2009). During the same year, excavations in adjacent room 33 revealed the presence of numerous, largely complete, Gallinazo-style finewares including a negative reduced ware with two spouts and a strap handle (Swenson et al. 2009; see Photo 4.4 and 4.5). The combination of well-made domestic features, platforms, finewares with zone 4's highly restricted access (especially after the installation of plug #2) and the general depth of its rooms argue that this area was of a private nature and largely inaccessible to many of the constituents of Jatanca, especially in light of prior archeological work related to restricted access patterns in monumental architecture (Feldman 1985, 1990; Pozorski 1982, 1985; Bawden 1982, 1996, and 2001).

In many respects, **zone 5** is the most unique of all of the zones in Compound I as it contains some symmetrical relationships and a distributive relationship. In addition, two rooms #66 and #57 appear to have been especially important nodes as they connect with multiple rooms and each-other. In fact, from either room #57 or room #66 most of the rooms within zone 5 are only one or two links away. Adding to the overall sense of accessibility, this zone has multiple entrances (n= 6), some of which are located in what might have been relatively low-visibility areas such as along the western exterior wall. Nonetheless, perhaps somewhat surprisingly, there are relatively "deep" areas within this zone as rooms #37, #40, and #65 are five links from the exterior.

Another way to view the room linkages in Compound I is to make a Gamma/Room Location Chart (general idea taken from Hillier and Hansen 1986). This chart (Figure 6.19) maintains the spatial integrity of the rooms by placing a dot in the relative center of each room and then representing all inter-room connections with a straight line.[16] The advantage to this representation is that one can see at a glance the obvious differences in how rooms are linked within all five zones: Zone 1 has a linear, chain-like pattern; zone 2 has a weak tree-like pattern, but before plugs #1, #2, and #3 were installed, one could access much of the compound from this entry; zone 3 is organized in a chain-like fashion and is isolated from the rest of the compound; zone 4 is also highly isolated from the rest of the compound and can only be accessed through room 5, at which point it assumes a weak non-distributive, tree-like pattern; and zone 5 is the most easily accessed of all of the zones as demonstrated by the presence of multiple entries and a relatively ring-like pattern of access among the rooms.

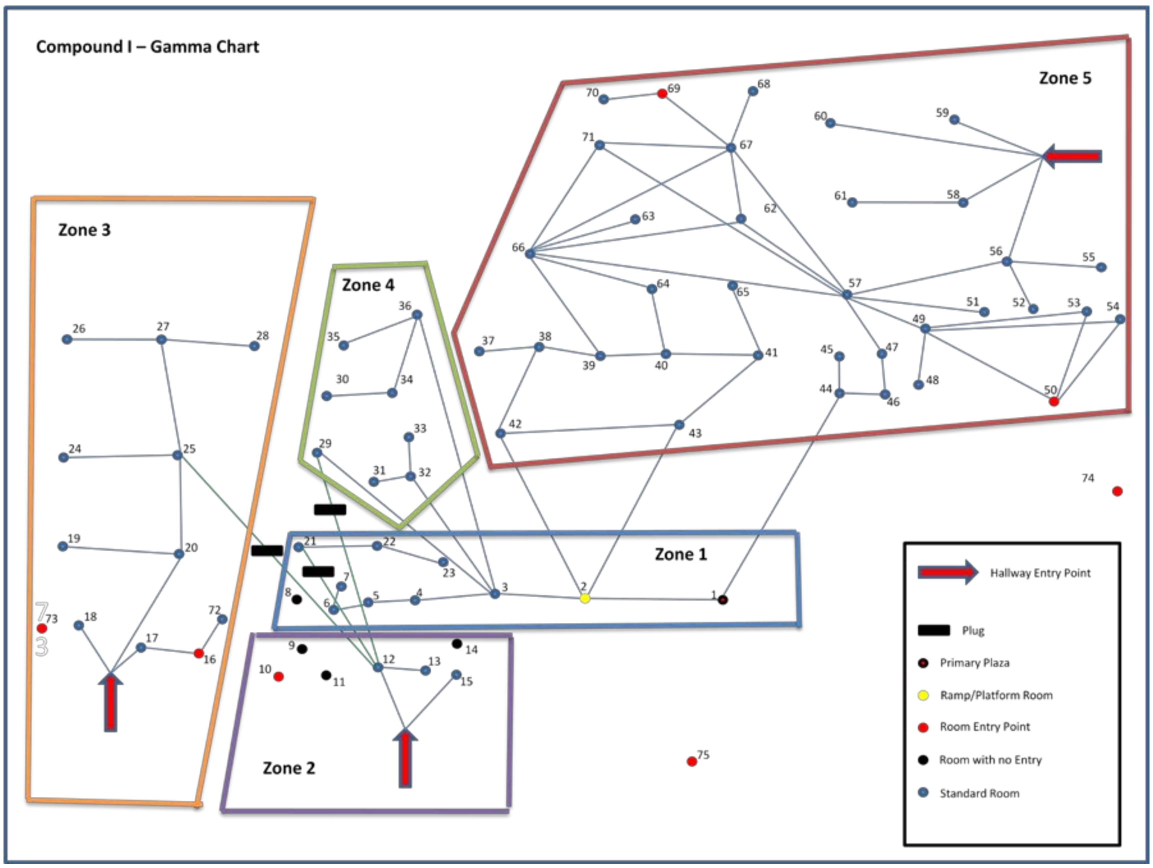
One can also clearly recognize that despite being conjoined via a series of shared walls, access between them is minimal at best; only a few entries permit zone-to-zone access within the compound: Zone 1 shares an entry with zone 4 and three entries with zone 5; after the installation of the plugs, zone 2 is isolated from the rest of the

[16] In an effort to reduce confusion, some dots have been moved slightly, but are still located within the room for which they represent.

compound; zone 3 is internally isolated from the remainder of the compound; zone 4 shares a single entry with zone 1; and zone five is internally connected only to zone 1. Finally, the organizational needs of those who had access to Compound I changed over time as evidenced by the placement of plugs 1, 2, and 3 which ultimately reduced the overall accessibility of zone 3, but especially zone 4. This change in access may indicate a desire to further hinder the flow of traffic and increase the privacy and/or security of those residing within this zone.

The differential room access patterns and limited intra-compound zone segregation identified within Compound I likely reflect both the housing and the segregation of specific activities within specific zones. For example, the Primary PRPC is made up of rooms #1 and #2. Its spacious interior plazas and associated ramp/platform room indicate that it was capable of hosting large-scale events that could have involved hundreds of people, or a wide cross-section of Jatanca's constituent population (see Chapter 7). Room size coupled with the Primary PRPC's "shallow" depth may further indicate that it was (at least periodically) more accessible than room #7, or any of the rooms located in zone 4, which are segregated from all other zones except for zone 1. Furthermore, it seems likely that zone 4's spatial segregation and relatively small room size is related to the need to provide a series of portioned spaces that isolated smaller-scale activities occurring within this area from other activities that were occurring within adjacent zones such as 3 and 5. Given the presence of the features such as a hearth basin, *deposito*, and bench within room#33 (see Chapter 5), at least a part of the activities that took place in zone 4 were domestic in nature (see Chapter 7). However, it should be pointed out that the direct access between zones 1 and 4 may also reflect a need for individuals residing, and/or working within zone 4 to have, at least periodically, immediate access to zone 1 (see Chapter 7). To sum: based upon the limited room connectivity exhibited in the gamma analysis, it could be argued that Compound I is made up of numerous conjoined zones that operated relatively independent of each other, and were the loci of perhaps radically different activities. For example, zone 1 may have been used primarily for ritual and political activities (see Chapters 7 and 8), zone 4 used at least in part for domestic residence, while zone 5 and zone 1 may have been utilized for storage. By internally partitioning and reducing interior between-zone access either to a minimum or altogether, activities pertaining to the functional, domestic, and ritual spheres of daily life could be undertaken simultaneously within the compound and not interfere with each one another.

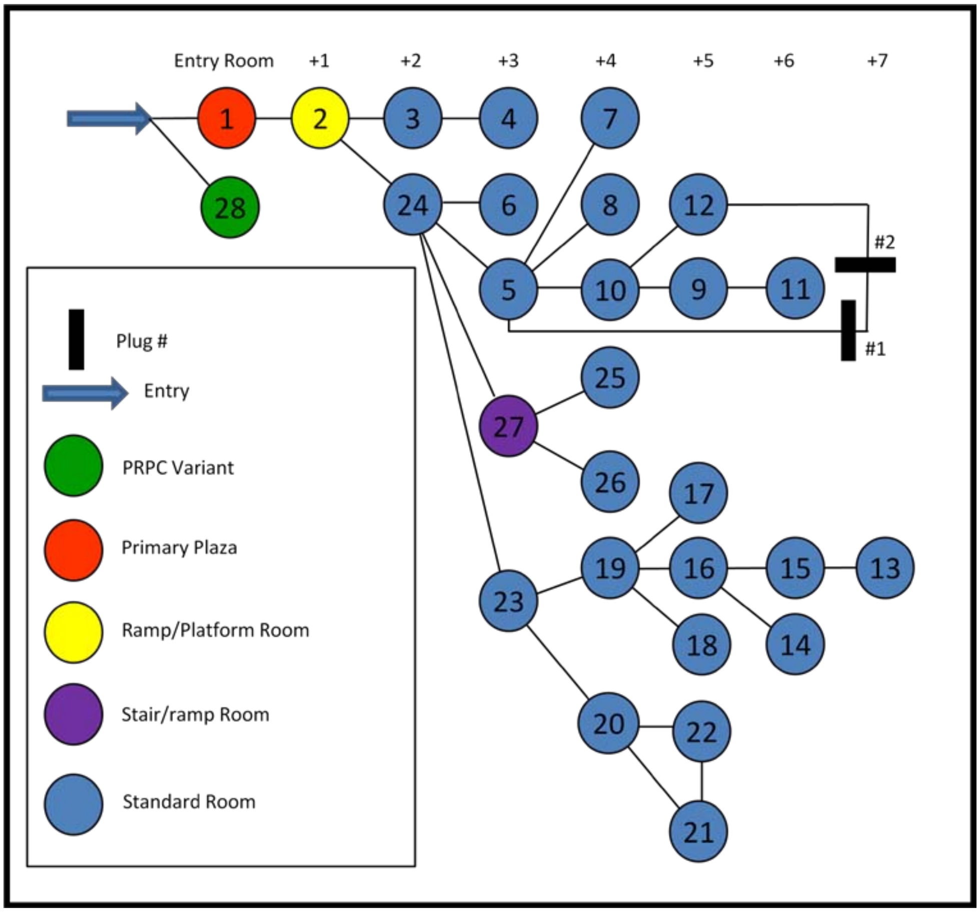
Figure 6.19 – Gamma/Room Location Chart Compound I



Compound II

When rooms and access points are mapped via gamma analysis, Compound II (Figure 6.20), the second-largest compound within Jatanca's architectural core produces a map that is considerably different from that produced by Compound I. Whereas Compound I is composed of five distinct zones, most of which could have functioned independently of each other, Compound II appears to have been organized as a far-more integrated whole, which is due partially to the fact that this compound has only one point of entry – through the Primary PRPC. This has also resulted in Compound II having a greater room depth (n=8) than that of the much larger Compound I.

Figure 6.20 – Gamma Chart Compound II



The rooms in Compound II are linked in a primarily asymmetrical non-distributive manner resulting in a “tree-like” pattern, which emphasizes room depth and highly controlled interior movement via the presence of a number of organizational features. For example, there is a PRPC Variant (room #28) to the west of the entry into the Primary PRPC. Since there is only one entry into Compound II, all traffic in and out of the compound could have been easily observed from this vantage point. Access into zones 2 and 3 was made through a single narrow entry located in the western wall of room #2 to the south of the ramp/platform feature. Furthermore, access into all +4 rooms and higher (n=18) is mediated by only three rooms - #5, #23, and #27, all of which served as integral access nodes. Finally, gamma analysis demonstrates that rooms #25, #26, and #27, which make up the Ramp/Stair Room, are somewhat similar to zone 4 in Compound I in that they are located in the northeast portion of the southwest annex and are spatially segregated from the rest of the compound despite their overall central location.

As with Compound I, there are plugs that have been retrofitted into a lengthy dead end hallway at some point after the original construction that blocked the original connection between room # 5 and room #12. The location of these plugs is curious. One plug was used to block the doorway into room #12, and the other was placed within the middle of the dead-end hallway, creating in the process a kind of long, thin room with no access. While it is impossible to know which of the plugs was placed first, the end result was that traffic intended for room #12 had to first pass through room #10.[17]

While the zones that make up this compound are more integrated than those within Compound I, this does not necessarily mean that there was greater ease of movement within the interior. Internal access was only achieved after first passing a PRPC Variant and through the Primary PRPC. Deeper access was only achieved after passing through a small number of rooms that controlled traffic into the rooms further down the line. Finally, like Compound I, there was a series of rooms within the southwestern annex that were removed from any "through traffic" within the compound.

[17] Room #10 was excavated in 2007 and again in 2008. The 2007 excavation in the southern sector of the room revealed the presence of a single flexed burial that was oriented toward the west. The skeleton was that of a young female somewhere between 20 and thirty years of age. The burial had been interred without any grave goods (see Swenson, Chiguala, and Warner 2008). This room also contained numerous aligned postholes that indicate that there had been a roof made out of perishable materials covering the southern sector. The northern sector was excavated in 2008 and was largely devoid of any significant features beyond discoloring due to the burning of small, controlled fires. This sector may have served as an open plaza for the adjacent roofed portion of room #10 (Swenson, Chiguala, and Warner 2008, 2009).

Compound III

The gamma map generated by Compound III (Figure 6.21) differs somewhat from that of Compound I and Compound II as the room links produce a series of asymmetrical and non-distributive patterns that result in an access layout that is as “chain-like” as it is “tree-like.” The chain-like aspect is created by the linear pattern formed by rooms #1 through #7 and #12. Room #12 is a key in this compound as this is also a major linking room for 5 rooms – all at the +4 position or greater – which also gives the access patterns in Compound III a tree-shape.

Beginning at the north entry, room #1 and Room #2 makeup the Primary PRPC which, as is typical, is found at the entrance of the Compound. Immediately to the north of this complex and next in the access chain is the Secondary PRPC made up of room #3 and room #4. The next room in the chain is room #12 which is an irregularly shaped room from which one is able to access the remainder of the compound. Rooms #5, #6, and #7 are located at the end of the chain and make up the PDSP (room #5 and room #6) and the Large Dais Room (room #7), whose small size and direct axial entry from room #6 gives the impression that it too is part of the PDPS Complex (Figure 6.22). Since these three rooms are located at the end of the linear access chain, they might occupy a low traffic position, much the same as zone 4 in Compound I, or rooms #25, #26, and #27 in Compound II and represent an intentional effort by Jatanca’s architects to minimize general access to the activities, occupants, and/or items associated with this portion of the compound.

Figure 6.21 – Gamma Chart - Compound III

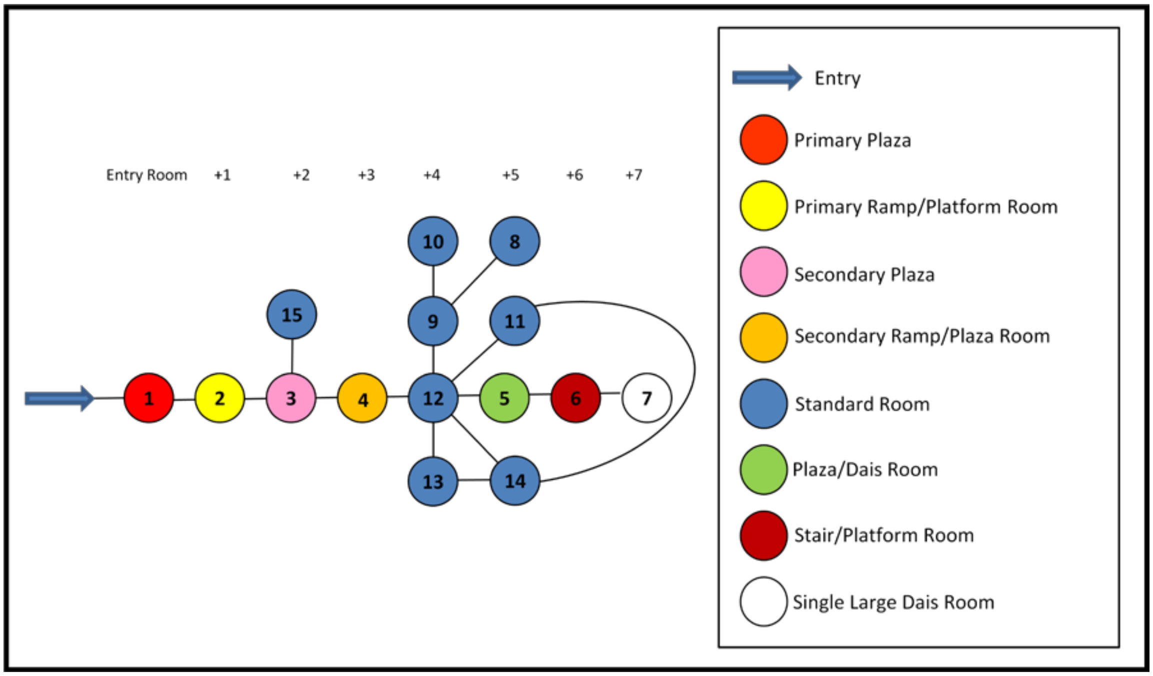
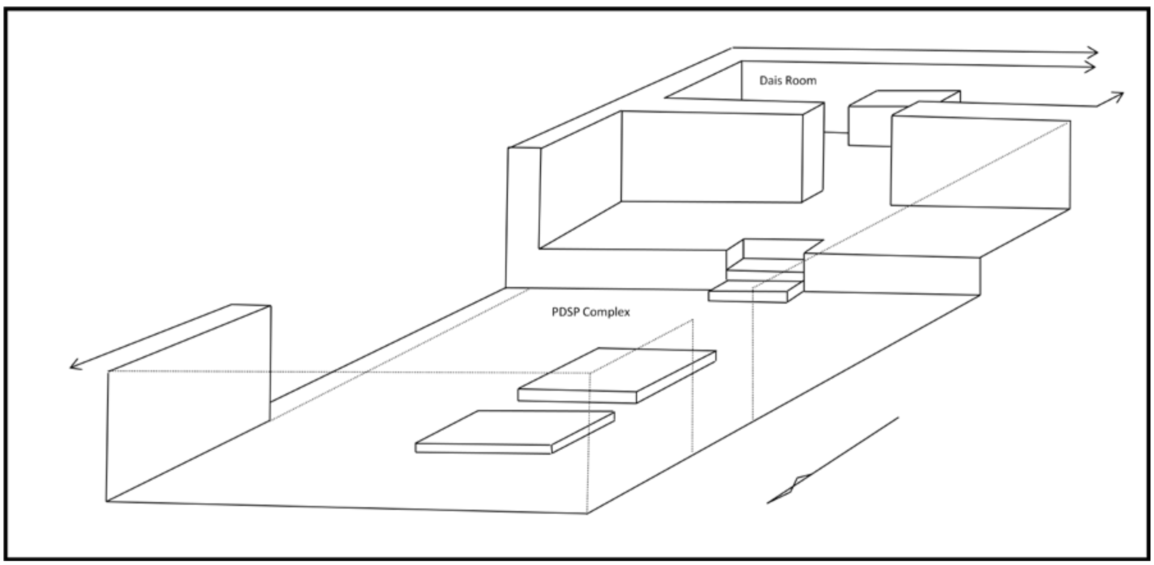


Figure 6.22 – PDSP Complex and Dais Room (not to scale)

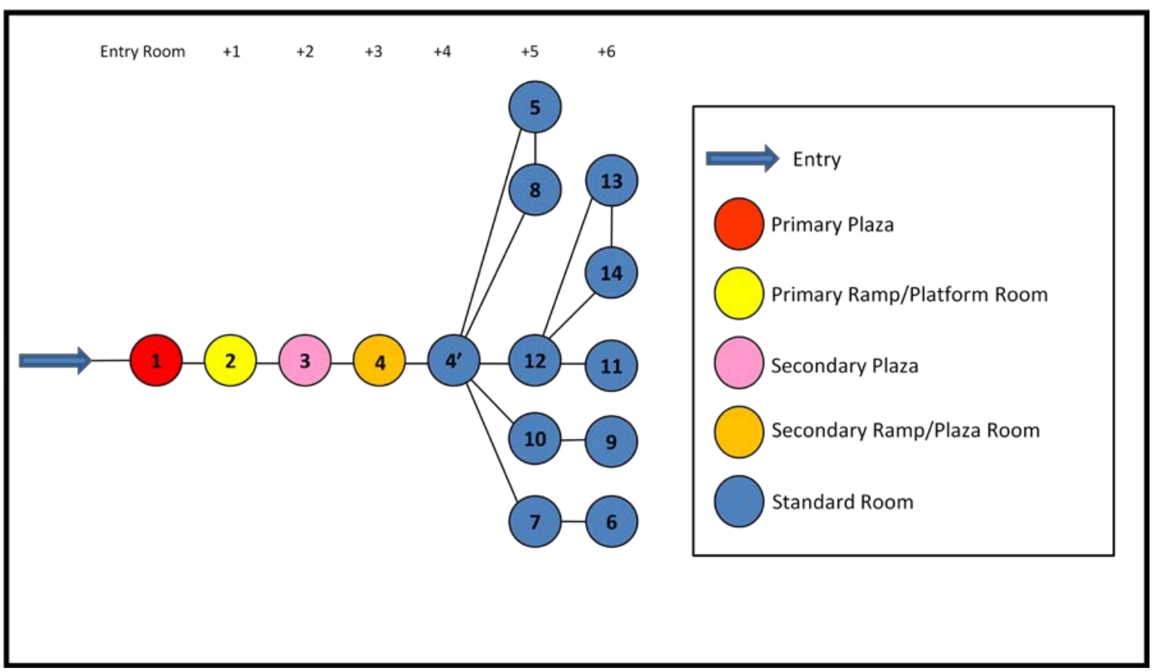


As with Compound II, Compound III is far more integrated internally than Compound I, but this should not be taken as an indicator that internal access was any less regulated. In fact, the linear shape of the interior access pattern created by the stringing together of asymetrically linked rooms along with short, non-distributive side branches prevents freedom of movement within the compound as travel between most rooms necisitates passing through room #12. Furthermore, baffled entries associated with the Primary and Secondary PRPC would also be more likely to restrict than encourage inter-room access.

Compound IV

The gamma analysis of Compound IV is somewhat problematic due to the presence of a large, semi-stationary sand dune within the southwest annex. As a result, the artificial room number 4' has been used to demarcate the area of the dune that obscures room-to-room links within the annex. Despite this methodological issue, the resulting gamma analysis tells us quite a bit about the organization of room access within Compound IV (Figure 6.23).

Figure 6.23 – Gamma Chart - Compound IV



There are two taphonomic issues related to the creation of a gamma map for Compound IV. The first issue is the large dune just to the south of room #4 that obscures much of the central portion of the structure. Since there is obviously a room behind room #4, I have elected to designate this unknown area as #4'which is obviously not an actual room, but instead a point within the annex where there would likely be a connecting room. In addition, due to the poor preservation of the southeast corner of Compound IV's CLC, I have expressed the relationship between room #4' and rooms #5 and #6 as direct with no intervening room or rooms. This seems doubtful, but rather than "create" data, the access relationship between these rooms, as it can be defined today, is used in this gamma map. The result of the presence of the dune and the damaged southwestern sector is a gamma plan that is simpler in terms of interior connections, and understates the number of rooms that make up this compound.[18]

From what can be established today, as is typical, the Primary PRPC also serves as a formal entry, and based upon patterns established in Compounds II and III, the only entry into the compound. Slightly deeper in the chain of access is the secondary PRPC, which occupies rooms #3 and #4, which gives this portion of the gamma map a chain-like appearance. Beyond this, within zone 3, the access patterns are composed of a series of non-distributive and symmetrical relationships. Yet as best as can be determined, it appears as though travel between many of the rooms still necessitates passing through the room #4' area. This implies that despite the presence of some symmetrical relationships, that freedom of movement may still have been somewhat restricted within this zone. Ultimately, as with compounds II and III, the overall pattern of between-room access within Compound IV is tree-like – a well-defined chain-like entry, followed by branches composed of asymmetrical and symmetrical links.

Compound VI

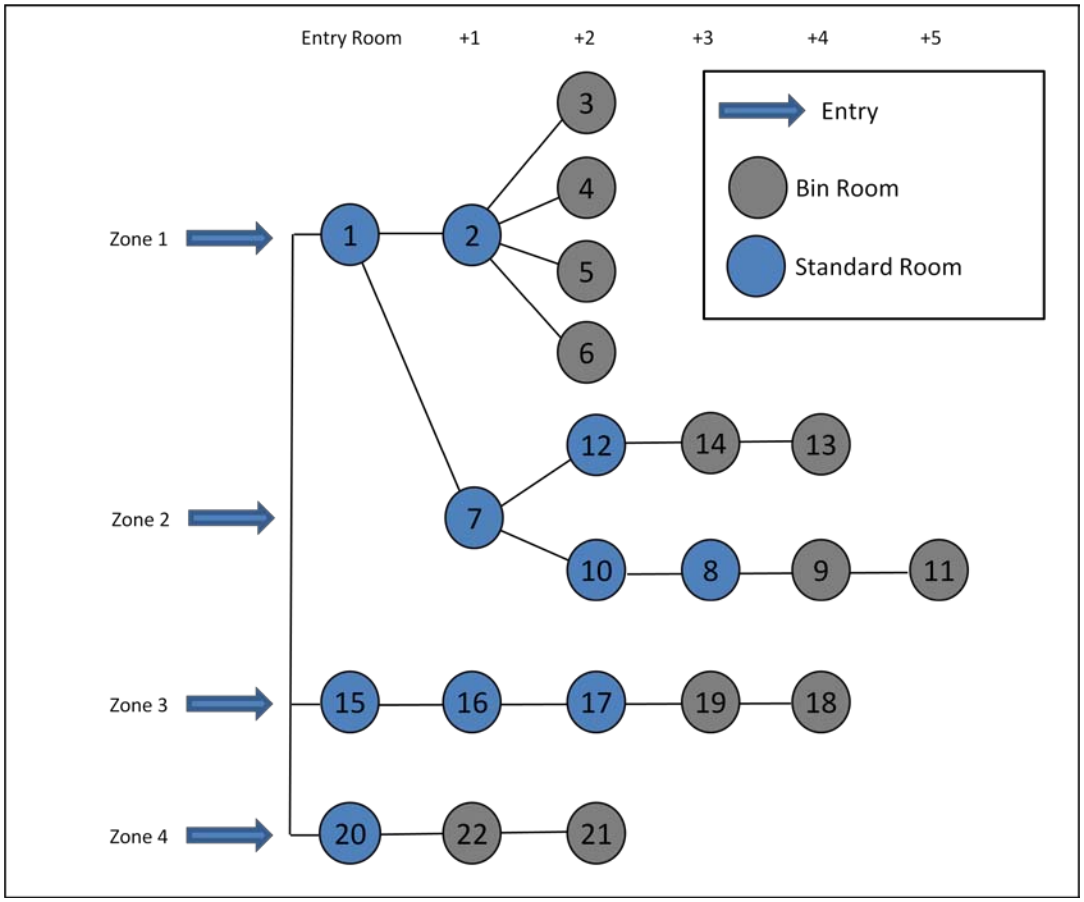
At a glance, the gamma chart clearly confirms the presence of four separate zones within Compound VI (Figure 6.24). There are three independent entries that provide access into the four zones and with the exception of the links that connect room #1 with room #2 and room #7, none of these zones is internally linked to its neighbor.

[18] Subsurface radar will be used during the 2010 field season to help identify the presence of rooms and entries within the southeastern sector.

Of additional interest is that room access within the zones is organized in two different ways. The rooms in zone 1 are organized in a non-distributive manner. Overall, they create a tree-like pattern that is not particularly deep - extending only to +2 from the entrance. The room links in zone 2 are organized in an asymmetrical manner as once past room #7 the overall pattern breaks into two linear chains. When combined, however, zones 1 and 2 have a non-distributive and asymmetrical pattern of internal access due to their shared use of room #1 as an entry and the non-connecting, branching pattern created by rooms #3, #4, #5 and #6 along with rooms #10 and #12. The rooms in zone 3 create an asymmetrical, chain-like pattern, with room #11 located 5 rooms deep within the compound. Zone 4 is organized as a very shallow linear chain. All of the zones and associated asymmetrical and non-distributive links terminate in a bin room located within against the south wall of the compound.

The tree-like and chain-like patterns associated with each zone emphasize a sense of restricted access into the bin-room area. This is further substantiated when one take into account that many of the rooms are connected via baffled entries, eight of the bin rooms have a restricted entry, and four of the bin rooms do not have a formal entry that permits easy access. Furthermore, within zone 1, there are two lengthy walls that serve as baffles. One of these is used to separate zone 1 from zone 2, while the other is used to separate room #1 from room #2 and the associated bin rooms. Additional baffles can be found within zone 2 and zone 3. Only zone 4 has a direct, open access, which would have made activities carried out within this room open to scrutiny from the north. The presence of zone 4's architecturally unrestricted access is surprising given the obviously restricted nature of zones 1-3 where baffles and restricted access patterns composed of asymmetrical and non-distributive links between rooms were liberally employed.

Figure 6.24 – Gamma Chart - Compound VI



The Acropolis

When compared to the other Jatanca compounds, the Acropolis (Figure 6.25) has a very unique pattern of access combining asymmetrical, symmetrical, distributive, and non-distributive patterns of organization. There are numerous rooms around the periphery of room #1 that are directly accessible from the exterior – a situation similar to that of Compound I. Unlike Compound I, however, entry into these rooms does not permit further entry into the interior of the compound.

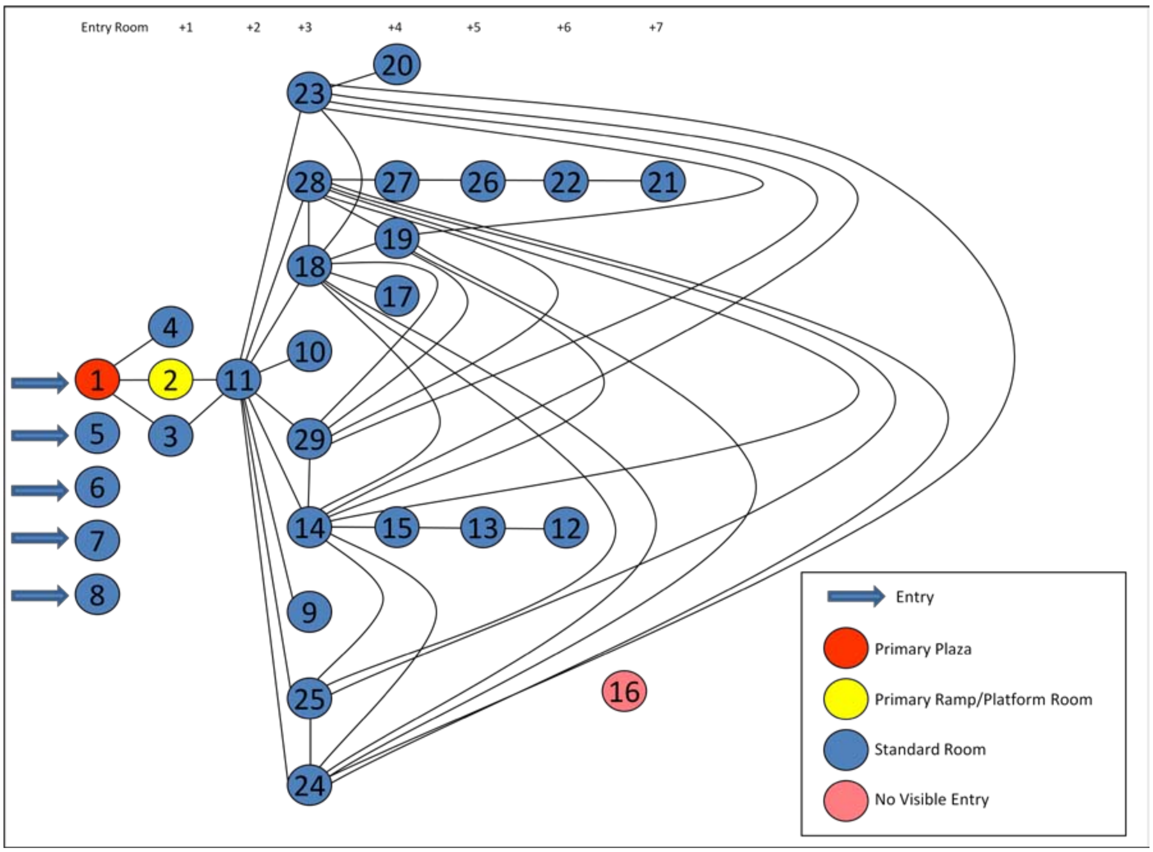
Room #11, which demarcates the beginning of zone 2, is also a critical node of access into zone 3 as all traffic beyond zone 1 must pass through this room creating a bottleneck. Unfortunately, the pattern of room organization in this zone is somewhat obscured by the presence of a large *zapote* bush growing within a stable sand dune that prevents the identification of any additional surface architecture. As a result, if there are additional rooms within zone 2 through which one needed to pass on their way to zones 3 and 4, the maximum room depth (n=7) of the compound may be considerably greater. In addition, there are a few small rooms located along the western edge of the zone, but distinguishing their parameters and inter-room linkage has been made difficult due to erosion along this edge. Therefore, the complexity of spatial organization within this zone is perhaps somewhat understated in Figure 6.25.

Zone 3 is one of the few zones within Jatanca that has a significant number of rooms connected via both symmetrical and distributive links, which results in a ring-like pattern of inter-room access. In this respect, zone 3 of the Acropolis is similar to zone 5 in Compound I. The creation of this pattern is facilitated greatly by the presence of three north-south hallways; two of them link zone 3 with zone 2 and one of them links zone 4 with zone 3. Adding to the "open" feel of this area is the general lack of baffled entries. Finally, it should be mentioned that as with zone 2, this zone has been extensively damaged along the western edge, resulting in the probable loss of at least some room access data.

Zone 4 consists of a single open space that has been badly looted and destroyed from both wind and water erosion. Loose sand blown up the slope from the desert surface also obscures architectural details within this area. Excavations within this area conducted in 2008 identified badly destroyed walls and floors that could not be reconstructed into meaningful room access data for this chapter (Swenson et al. 2009). Clearly, however, at some point, there were rooms within this zone.

Despite the ring-like form of zone 3 which provides relatively easy inter-room access and much higher degree of freedom of movement than that within most other compound zones, it needs to be stressed that this does not necessarily mean that the Acropolis as a whole was more "accessible" to a broader range of Jatanca's constituency than Compounds I-IV. In fact, zone 3 can only be reached after first passing through architectural features designed to impede casual traffic; a narrow north door in the north wall of room #1; a large, visually unobstructed plaza; ramp/platform features – one of which projects out into the hallway that links zone 1 and zone 2; a narrow, high-walled hallway; and room #11, which created a transportation bottleneck as all traffic heading in or out of the southern sector had to pass through this room. Once within zone 3, however, all of the rooms were relatively accessible.

Figure 6.25 – Gamma Chart – Acropolis



Quantifying Access: Beta Analysis and Depth

In addition to the somewhat subjective gamma analysis, there is also a mathematical means by which the relative connectedness of a building can be measured known as beta analysis (Hillier and Hansen 1987). The advantage to using this method over gamma analysis is that it provides a simple value representing relative "connectedness" of a structure's interior rooms that can be easily compared against results gathered from other sites (Moore 1996). The beta index is a measure of the ratio of rooms (vertices) to edges (connections between rooms) and is expressed mathematically as the following formula (Moore 1996):

$$\boldsymbol{b} = \frac{\boldsymbol{E}}{\boldsymbol{V}}$$

In general, buildings that have tree-like, or chain-like (disconnected access) tend to have indices of less than 1.0 whereas buildings that are ring-like (well-connected access) have an index closer to the maximum of 3.0 (Moore 1996). This is due to the fact that a perfectly chain-like linkage will have one less edge than vertices. Therefore, if a hypothetical building was composed of four rooms that were interconnected in a chain-like fashion, the resulting indices would be .75. On the other hand, if a building was composed of four rooms, any one of which is equally accessible from another, this would mean there were 6 edges and 4 vertices in the structure, resulting in a beta value of 1.5. This value is two-times larger than that achieved for the first example due to the fact that there are twice as many edges that link the rooms. Therefore, the lower the value for beta, the fewer edges there are relative to vertices, and the less accessible a structure is.

Calculating the number of vertices within each of the compounds is fairly straightforward; what has been identified as a room and assigned a number was counted as a room, with one important exception: rooms that were accessible from the exterior, but were not linked with any other room – such as room #75 within Compound I - were not included in the vertices count as they were not a part of the internal network of linked rooms. Rooms that had no visible entry – such as rooms #21, #22, and #23 within Compound I were included due to the fact that while there may not be an identifiable entry, they were nonetheless a part of the *internal system* of rooms that made up the compound. Mathematically, including them within the count makes sense. For example, room #14 within Compound I could only be reached from within the interior of the compound and including it increases the number of vertices by one and has no impact on the number of edges –quantitatively underscoring its generally inaccessible nature. Calculating the number of edges also presented minor conceptual challenges – especially given the placement of the plugs within Compounds I and II, but especially Compound I where their presence changed access routes considerably and diminished the number of edges by 6. Therefore a before and after plug comparison within Compound I is also provided below. In addition, given the size and lack of connectivity between Compound I's zones, a beta analysis of each zone also follows.

Once the vertices and edges were calculated and divided, the following table of indices (Table 6.2) results:

Table 6.2 – Beta Analysis of Jatanca Compound Access

Unit	Edges	Vertices	Beta
Comp. I Pre Plugs	70	70	1.0
Comp. I Post Plugs	64	70	.91
Comp. II	27	27	1.0
Comp. III	16	15	1.1
Comp. IV*	16	15	1.1
Acropolis*	45	24	1.9

*Due to the presence of the large sand dune within these compounds, these numbers are incomplete estimates.

An examination of the table indicates that Compounds I (pre and post plugs) through IV are relatively inaccessible since they have the same approximate number of vertices and edges. As a result of having almost twice as many room accesses as rooms, The Acropolis has a beta value of 1.9 indicating that the rooms within this structure had much greater connectivity and by extension, allowed much greater freedom of movement among those within the interior – especially within zone 3. However, one must remember that access into zone 3 was apparently well-restricted by a series of architectural features designed to discourage traffic into the interior. Therefore, once inside of zone 3 there appears to have been less of a premium placed upon the restriction of internal movement when compared to Compounds I-IV, but gaining initial access into the interior appears to have been just as restricted.

The before and after beta value associated with the retrofitting of plugs within three of the hallways does not vary significantly due to the fact that it only adds six edges to the pre-plug total. However, this too is a bit deceiving as the three plugs denied significant inter-zone access. Once installed, plugs cut off room #12 in zone 2 from the following rooms and zones: room #21 in zone 1; room #3 in zone 1; room #29 in zone 4, and room #32 in zone 4. To remove the ability to access both internally remote zones such as zone 4, and ritually important zones such as zone 1 (see Chapter 7) from the unassuming east entrance associated with room #12 is of far greater social significance than is indicated by a .09 difference in a beta analysis. In fact, in Chapter 7 and 8 it is argued that the restructuring of Compound I is related to concurrent changes in the social organization of Jatanca.

Compound I's .91 post-plug beta value is attained by evaluating the entire compound as a whole. While physically Compound I may be made up of a massive series of adjoined rooms giving it a "continuous" look, access-wise, it is more disconnected than any of the other compounds since many of the zones are not internally accessible from adjacent zones that share a wall (i.e. zones 4 and 5, zones 4 and 3, zones 4 and 2, zones 2 and 3, etc.…). Furthermore, there appears to be some variation in the access patterns associated with each of these zones such as a chain-like pattern within zone 1 and the more ring-like pattern within zone 5. Therefore, it is beneficial to break-down the compound into its constituent sectors and run an additional beta analysis. The following chart demonstrates the results of beta analysis of the five sectors in Compound I (Table 6.3):

Table 6.3 – Beta Analysis of Zones in Compound I

Unit	Edges	Vertices	Beta
C-I/Zone 1	11	11	1.0
C-I/Zone 2	1	5	0.2
C-I/ Zone 3	10	11	0.91
C-I/Zone 4	8	8	1.0
C-I/Zone 5	38	35	1.1

Zone 1 (beta = 1.1)- All room relationships in this zone are asymmetrical and non-distributive resulting in a classic chain-like room linkage that emphasizes the depth and general inaccessibility of the rooms near the end of the chain.

Zone 2 (beta = 0.2)- Despite the presence of a direct exterior entry, once the tapia plugs were retrofitted into the lengthy hallway segment that led off of room #12, this zone became relatively isolated from the bulk of compound activities. As a result, there is only one between-room connection within this zone (room #12-#13). Further underscoring the de-emphasis upon connectivity within zone 2 is the presence of three rooms for which there is no visible entry (rooms #9, #11, and #14). Before the placement of the three plugs, however, one could have used this entry to directly access much of Compound I, including the Primary PRPC and PRPC Variant in zone 1, along with zones 3, and 4, which would have raised the beta value of this zone to .71.

Zone 3 (beta = .91). The rooms in this zone are organized by a series of asymmetrical and non-distributive relationships resulting in the .91 beta value.

Zone 4 (beta = 1) – The rooms in this zone are organized by a series of asymmetrical and non-distributive relationships and has a beta value of 1.0.

Zone 5 (beta = 1.1) – While this zone has more symmetrical and distributed relationships than the other zones within the compound, its beta value is surprisingly low. Close inspection of Figure 6.18 reveals that the vast majority of the room connection relationships are short chains of symmetrical and non-distributive links – despite the hub-like characteristics of rooms #57 and #66. However, as reflected by the beta analysis, freedom of movement and room access is emphasized more within Zone 5 than any other zone.

The beta analysis substantiates to a degree the presence of Compound I's divergent zone-based spatial patterning first identified in map and gamma analysis and reflects the possibility that radically different activities that had different spatial requirements were carried out within these zones (see Chapter 7). However, it also effectively demonstrates that with the exception of post-plug zone 2, inter-room access as a mathematical expression did not differ all that much between zones: all of the zones are relatively inaccessible. The beta results also demonstrate the need to incorporate additional data gathered from sources such as gamma maps, and the presence/absence of architecture-specific features such as PRPCs, PDPS Complexes, baffles entries, number of entries, and visibility when discussing access patterns in monumental constructions. Finally, Compounds I-IV all have a similar beta value – about 1, which indicates that between-room access within these compounds is similarly restricted. The acropolis in general, however, has a much higher beta value, indicating that inter-room access was much greater than its counterparts. Most of this discrepancy is due to the highly interconnected nature of zone 3.

Gamma and Beta Analysis: Conclusion

Perhaps the most important result of gamma and beta analysis was the revelation that between-room access within the major compounds was organized in a similar pattern so as to restrict interior access. In general, between room connections took on asymmetrical and non-distributive patterns which resulted in chain-like entries and tree-like patterns within additional interior zones. Linking these two broad patterns is a single room, usually located near the end of the asymmetrical chain, that served as a hub, or point of transition (CI = room #3; Compound II = room #24; C III = room #12; Compound IV = 4'; The Acropolis = room #11). In general, within these zones between room access is somewhat less controlled than within the entrance chain. This is especially true in the case of the Acropolis where zone #3 has 45 entrances that provide access between 24 rooms – a far greater degree of between-room access within the compound interior than that of Compounds I-IV. This discrepancy could be due to factors such as the differential function of the space and/or chronological differences in compound construction. Finally despite being much smaller in size, room connections within Compound VI also tended to restrict interior access.

Access between zones was also highly restricted. In the case of Compound I, intra-compound access between zones such as 4 and 2 was impossible; one had to use exterior entries in order to move between zones. Intra-compound zone access is also of a generally restricted nature within the other compounds as well, as bottleneck rooms were used to facilitate, or control movement, and in many cases, direct, zone-to-zone movement was impossible. In Compound II, movement between zone 1 and zone 3 could only be made via room #24 in zone 2. Within Compound III, zone 1 and zone 3 were also not directly accessible. In fact, the only way one could access zone 3 was by passing through the Secondary PRPC. Within Compound IV one had to pass through zone 2 in order to move between zones 1 and 3. The lack of intra-compound zone access can also be recognized in Compound VI.

The use of room connections to restrict access occurred in conjunction with the strategic placement of architectural features. Baffled entries and high walls were used within the PRPCs to restrict from view access patterns and hallways that led further into the compound. Single, narrow entries within long, otherwise undifferentiated walls coupled with large empty plazas were employed to discourage casual access by pedestrians (see Moore 1996; Chapter 7). Locating doorways that led to the compound's interior between ritually/politically charged features such as ramps and platforms also prevented casual travel into the compound's interior (see Moore 1996; Chapter 7).

An additional major pattern revealed by gamma analysis is that in addition to a large Primary PRPC located at the entry, compounds I-IV all have an additional, much smaller complex that combines platforms and ramps, or platforms and stairs nested deep within their interior:

Compound I = PRPC Variant (rooms #21, #22, and #23)

Compound II = Ramp/Stair Room (rooms #27, #26, and #25)

Compound III = Secondary PRPC (rooms #3 and #4); PDSP Complex (Rooms #5 and #6)

Compound IV = Secondary PRPC (rooms #4 and #4)

It could be argued that a desire to insulate these compounds from activities that were occurring outside of the compound was a factor in their location. When one factors in their small size, it could be further argued that these nested complexes were used to host smaller, more intimate ritual and political events than those associated with the Primary PRPCs (Moore 1996; Chapters 7 and 8).

Given that all of the major compounds within Jatanca's core feature a highly restricted pattern of access that incorporation changes in elevation, and large entry plazas followed by sequentially nested areas suitable for ritual and political activities, it would seem that these structures share many of the architectural features used to identify differential access to status at earlier North Coast sites such as Huaca de los Reyes (Pozorski 1982, 1985) and Aspero (Feldman 1985, 1987). Therefore, it seems likely that there was a range of social statuses within Jatanca's constituency as well (see Chapters 7 and 8). It is also of interest to note that many of these same architectural patterns are incorporated into later, compound-based monumental architecture as well such as at Galindo Bawden 1982, 2001), Pacatnamú (Donnan and Cock 1986), and Chan Chan (Moseley and Day 1982; Moseley and Mackey 1974) – an issue that will be revisited in Chapter 9. However, before doing so, there is one final pattern related to interior compound access that needs to be examined; the possibility that right hand entries were privileged over left hand entries.

Privileged Right Hand Entry

At the Jequetepeque Valley site of Pacatnamú, Chris Donnan (Donnan and Cock 1986; see also Chiswell 1988, 1989; Moore 1996) argues that he has identified patterns of differential, or "privileged," entry within the site's major structure, Huaca I. The spatial organization of this building is complex, but can be broken down into two major constituent parts consisting of a large huaca, located in the north and an attached walled compound in the south.

Despite the presence of the large attached huaca, Huaca I is similar to the compounds of Jatanca in many respects as it is oriented along a north-south axis and is approached from the north. The compound portion of the structure (the Major Quadrangle) is made up of a series of rooms and open plazas that are connected both directly and via a series of lengthy hallways, some of which terminate in a dead end (Donnan 1986). Entry into the compound is made through a door located within the approximate center of the north wall.

When walking from the north toward the interior of the compound, there are occasions when the pedestrian is confronted by a choice of route that branch toward either the east ("left-hand route), or west ("right-hand" route). Typically, left-hand routes lead to areas identified as housing domestic activity, or what Donnan (1986) describes as a "a much more humble approach, suggesting it may have been used by people of lower rank – perhaps servants and/or others who were support personnel for staging ceremonies and maintaining the architectural complex" (1986:69). Conversely, the right-hand routes can be characterized as presenting a less humble point of entry. According to Donnan (1986:69) this side was "by far the more impressive architecturally" as massive pilasters create a monumental doorway that created an impressive formal entry into the compound. In addition, right-hand routes also provided a more direct path into the Major Quadrangle and were more likely to be used by "…important individuals entering or leaving the Major Quadrangle…" (1986:69).

Jerry Moore (1996) has built upon Donnan's initial work on access routes at Pacatnamú and argued that in some cases there was a potential third route as well. For example, when entering the Huaca I complex through the north entry, in addition to being able to choose a left or right hand route, one could proceed straight ahead on axis with the doorway and continue up the central ramp to the summit of the huaca. Therefore, according to Moore's scheme, there is a choice of three routes upon entering into the north plaza of Huaca I: to the left and into an area of domestic activity such as food preparation; to the right and through the architecturally embellished hallways that lead into the Major Quadrangle; or straight ahead and onto the summit of the huaca, at which point forward progress was no longer possible (Moore 1996; see Donnan and Cock for map). According to Moore (1996), of key importance regarding the "straight-ahead route" is that it involves a change in elevation. Moore further argues that this same triumvirate of path choices can be identified at additional Chimú sites such as the later compounds at Chan Chan, and within regional centers such as Manchan and Farfán (Moore 1996).

Access patterns within Compounds I, II, III, and IV all seem to share, to varying degrees, this privileging of the west (right-hand route) over the east (left-hand route). For example, interior compound access was made through a north entry into the Primary PRPC, meaning that interior travel was in the direction of the south. In all cases, when a person is first confronted with a choice between two paths, one to the right, and another to the left or straight ahead, the path to the right always leads into areas of the compound that contain either secondary PRPCs (Compounds III and IV), PDSPs (Compound III), or the Stair/Ramp Room (Compound II). In no example does choosing the left-hand route (or the straight ahead route when there is also a right-hand route) result in the expedient accessing of any ramp/platform or stair/platform features. In greater detail:

Compound I - In Compound I, within room #3, the westerly route leads into the most private area of the compound – an area that contains finewares, platforms, and well-constructed domestic architecture, while the route that proceeds through the center of room #3 dead-ends in room #7. Prior to the placement of the plugs, the right-hand route may also provided access to the PRPC variant made up of rooms #21, #22, and #23. Indeed, the majority of the interior compound is always access by moving to the west when confronted by the initial doorway decision. The route that goes straight ahead always dead-ends and does not permit much in the way of internal compound access.

Compound II - In compound II, there are two doors in the south wall of room #2 – one to the right of the south entry into the room, and the other on-axis with the south entry. The route to the right through the very narrow doorway leads to the triumvirate of stair/ramps, elevated area, and the entire rest of the compound. The central doorway leads into rooms #3 and #4 at which point interior access terminates.

Compound III - In Compound III, after entering room #3, one can go either straight ahead, or to the left. The left entry leads into room #15 and permits no further access into the compound. By going straight ahead, one can enter further into the secondary PRPC, the PSDP, and ultimately, the rest of the compound. What is of perhaps special interest is that within the secondary PRPC the right/left-hand pattern is replicated once again. If one proceeds to the left, they enter room #15, which dead-ends immediately. If one goes straight, however, they find themselves within the ramp/platform room of the Secondary PRPC (room #4). Within this room are two more route choices; one to the left and one that proceeds straight ahead. By selecting the latter route, one has immediate access to the PDPS Complex, while the left-hand route empties into a hallway.

Compound IV - While the access patterns in Compound IV are somewhat unique, this general pattern still holds true. After entering the primary plaza, one can either go straight ahead, or to their right through a door in the middle of the west wall. By passing through the latter entry, one is able to quickly access the secondary PRPC and the remaining compound beyond. If one continues straight ahead to the central door in the south wall of room #2, they are still able to reach the secondary PRPC, but only by a lengthier, circuitous route. In fact, one is still confronted with a choice within the southern-central doorway of going right or left. To the left (east) the corridor quickly dead-ends in a small "room" that has been created by expediently baffling the dead-end hallway. It is only by going to the right (west) that one can enter the remainder of the compound. Indeed, it may be that the only reason for the existence of this small room carved expediently out of the dead-end hallway is to satisfy the spatial/access demands of privileging the western access over the east.

Compound VI - While not to overemphasize the pattern, it should be noted that even within Compound VI, when moving from north to south one generally favors the right-hand side along the path in order to reach the reach the small bin rooms. This is especially true for zone 1, zone 2, and zone 3.

What is perhaps of more interest is that the Acropolis does not appear to display this right-hand favoritism. While many scenarios can be created to explain this, perhaps the best explanation is related to the chronology of site development. It is possible that the Acropolis was constructed before the conceptual development of right-hand (or western) favoritism developed and the compounds were built a few hundred years later and after the development of this organizational canon and its incorporation into Jequetepeque Valley architecture. In addition, the privileging of right-hand entries at Late Intermediate Period sites such as Pacatnamú and Chan Chan may constitute further evidence that purposeful "acts of remembrance" via the manipulation of social memory by human agents and manifest in highly-visible monumental architecture was responsible for the adoption of at least some of the architectural canons found at these later sites – an issue that is explored further in Chapter 9.

Architectural Replication and Access Patterns: Conclusion:

The layout of Jatanca's compounds vary as at times they adhere to shared canons of bi-lateral organizational, while at other times these same organizational principles are ignored and the compounds exhibit idiosyncratic architectural expressions. The form, gamma, and beta analysis in this chapter have resulted in a number of statements that can be made with regard to Jatanca's architectural replication and access patterns.

All of the compounds share a number of features:

1. They all have the same orientation
2. They are all approached from the north and have north entry
3. They all incorporate architectural examples of bi-lateral organization
4. Smaller rooms are found within the southern portion of the compound

All of the **major compounds** (Compounds I-IV and the Acropolis) have:

1. A similar elongated rectilinear footprint (the CLC)
2. A large north plaza that also served as a primary entry
3. Ramp/platform architecture in an adjacent room to the south of the plaza
4. The largest portion of the compound positioned behind the north plaza

Architectural replication within **Compounds I-IV** includes:

1. A primary PRPC located in the northernmost portion of the compound
2. The nested distribution of small plazas that incorporate platforms, ramps, and/or stair features.
3. The above small plazas are never located along the eastern wall of the compound

The bi-laterally organized **Primary PRPCs** in Compounds I-IV all share features such as:

1. A north entry in the center of the north wall
2. First room entered is a large plaza
3. Focal point of the plaza is an elevated room to the south
4. Elevational change between the two rooms is made via a combination extended/inset ramp
5. The elevated room contains a pair of ramp/platform features set in mirror opposition
6. Between the two ramp/platform features in the center of the south wall is a baffled entry
7. The entry in the south wall provides access to areas within the compound
8. The Primary PRPC is organized bi-laterally

Compounds III and IV have a Secondary PRPC

1. The layout of this complex is the same as the Primary PRPC
2. They are always smaller than the Primary PRPC
3. They are located adjacent to the Primary PRPC

Compounds II and III Have at least one PRPC Variant:

1. They are located adjacent to the main entry
2. They are oriented north-south
3. They are in a position to oversee traffic in and out of the compounds

In addition to identifying the above replicated architectural features, gamma and beta analysis identified a number of between-room access patterns that were shared by all or many of the compounds:

All of the compounds shared a number of features:

1. In general, room linkages were constructed so as to discourage interior access
2. The use of non-distributive and asymmetrical links between rooms were far more common that the use of distributive and symmetrical links.

3. Entryways within zone 1 were composed of long asymmetrical links that branched out near the end of the chain into a series of short, non-distributive links.
4. The transition between the chain-link entry and the tree-like interior was made via a single room ("bottleneck" room) within which most of the traffic in and out of the compound could be observed.
5. Direct zone-to-zone access was impossible between many zones.
6. Generally, zone 1 was not directly connected to zones deep within the compound – i.e. in order to reach zone 3 from zone 1, one had to first pass through zone 2, which further emphasized the "depth" and inaccessibility of the compounds. Access to this area is restricted via the incorporation of numerous architectural features.
7. Interior passage may have privileged the west, or right hand, over left-hand paths.

For **Compounds III and IV**:

1. The Secondary PRPC always immediately follows the Primary PRPC.
2. One travels to the west through a right-hand entry in order to reach the Secondary PRPC
3. One must pass through the Secondary PRPC in order to reach the rest of the compound

The above effectively demonstrates that compound access within Jatanca was restricted to casual entry, especially when one takes into account the liberal use of features such as baffled entries and dead-end hallways. This restricted architectural access is especially interesting as it appears as though access between the various compounds of Jatanca was unrestricted. There are no existing walls between the compounds designed to restrict, guide, or otherwise influence the flow of internal traffic such as those identified at Galindo (Bawden 1982, 1996; Haas 1981; Lockard 2008; but see also Topic and Topic 1985; see also Chapter 3). The only walls that inhibited intra-site traffic were those that defined the compounds themselves.

In general, rooms within the compounds are linked in an asymmetrical and non-distributive manner, resulting in chain-like and tree-like patterns of access that may have privileged right-hand access routes over straight or left-hand alternatives. These patterns create room-depth and restricted patterns of access, which implies a desire on the part of Jatanca's architects to create nested areas of increasing privacy and discourage passage within the compound. This desire is further substantiated by the generous use of baffled entries, bottleneck rooms, and narrow entries that shield activities within adjacent rooms. In general access beyond the baffled entries found in the south wall of room #2 in Compounds I-IV was probably greatly discouraged. This likely indicates the presence of a range of social segments among Jatanca's constituency; at the very least, some have easy interior access while others do not. This is a theme discussed in greater detail in Chapters 7 and 8.

Along these same lines, the increasingly interior location of sequentially smaller and smaller PRPC-style architectural complexes substantiates the above pattern of restricted compound access further. The primary PRPC (or in the case of the Acropolis, the PRPC Variant) is always located within the most-shallow portion of the access chain: room #1 and room #2. These rooms combine to make up the largest area of the compound (see also Chapter 7). Smaller Secondary PRPCs, PRPC Variants, and PDSP Complexes are always located deeper within the chain. In no case is a smaller complex that features PRPC-style features in conjunction with a plaza encountered before a larger one; large Primary PRPCs are always located at the entrance, smaller Secondary PRPCs, PRPC Variants, and PDSP Complexes are always located within the interior. This pattern of a simultaneous increase in interior architectural depth (and reduced accessibility) along with a decrease in plaza/room size has also been noted by Feldman at Aspero (1985, 1990), Pozorski at Huaca de los Reyes (1982, 1985), and Bawden at Galindo (1982, 1996, 2001). Therefore, based upon access patterns and plaza size, it could be argued that the activities that occurred within interior plazas were of a more restricted nature and attended by far fewer people than those within the north entry plazas.

The reemergence of architectural features found during the Late Formative Period at Jatanca such as free-standing compound-style architecture, nested replicated plazas that diminish in size, the use of simple ramp/platform configurations as a focal point within plaza space, and the privileging of right-hand routes over left hand routes during the Late Intermediate Period at Chan Chan, may provide evidence that human agents were purposefully manipulating ties to the past that were contextualized within collective memories in order to justify and consolidate newly emerging sociopolitical relationships of both an internal and external nature (Bevan 2006; Connerton 1989; Hobsbawm and Ranger 1983). Monumental architecture, due perhaps to factors related to its size and visibility, apparent permanence, and symbolic content made it an especially attractive media through which ties to the past could be established, rejected, or modified in order to modify group behavior and achieve the political ends for at least some segment of society (Bevan 2006; Yoffee 2007). In this scenario, architectural mimesis was not simply "tradition" or a series of arbitrary stylistic/organizational decisions made by urban planners, but an important political tool that was purposefully and skillfully used to benefit certain segments of society through the manipulation of group identity (Bevan 2006; Dobres and Robb 2000; Yoffee 2006).

Along these same lines, monumental architecture and the features from which it was constructed not only reflected sociopolitical order, but also reified it as well (Rapoport 1982; Lefebvre 1991). For example, some segments of society were able to freely enter into restricted compound interiors, while others were not. During ritual and/or political activity (see Chapter 7), some people occupied places of prominence, while others did not. What constituted acceptable behavior (group or individual) within some architectural and spatial environments was unacceptable within others (Rapoport 1982).

Clearly, access patterns within the compounds were purposefully designed and manipulated in order to control the relative accessibility, or "privacy" of a room, complex, or zone in a predictable manner. It now remains to discuss the social and organizational precepts behind these redundant architectural features, which is the focus of the next two chapters. Chapter 7 examines how the compounds functioned, both as a whole and as divided into constituent parts from the perspective of theory generated from performance theory and proxemics. Chapter 8 combines data and theory from Chapters 6 and 7 in order to elucidate the sociopolitical organization of Jatanca.

Chapter Seven: Compound Function and Proxemics of Ritual Space

Introduction

The major compounds[1] (Compounds I-IV and the Acropolis) that comprise the architectural core of Jatanca are large, internally complex structures that have both shared and idiosyncratic architectural components (see Chapter 6). For example, all of the major compounds have a Plaza/Ramp/Platform Complex (either Primary, or PRPC Variant) located in the northernmost portion of the compound that also served as a formal compound entry, and locus of political activity (see Chapter 8). Spatially, inter-room access tends to be organized via a series of non-distributive and asymmetrical links (see Chapter 6). Some of the idiosyncratic architectural expressions associated with the compounds include the Stair/Ramp Complex in Compound II, or the PDSP Complex in Compound III (see Chapter 6). This chapter will use accumulated data from previous chapters to gain insight into the numerous activities that occurred within the compounds. This is especially important with regard to the PRPCs (Primary, Secondary, and Variant) and the PDSPs as understanding these specific architectural complexes is perhaps the key to understanding the socio-political organization and social dynamics of the site as well (see Chapter 8). Therefore, it is to these spatio-architectural similarities and differences that this study now turns.

This chapter examines archaeological data, both from Jatanca and from other North Coast sites in order to determine what types of activities, both ritual and non-ritual, may have occurred within the confines of Je-1023's central compounds. Based upon data presented in previous chapters, it is clear that the compounds were the center for numerous activities that need to be made more explicit. Second, this chapter will narrow its focus somewhat and concentrate on describing the specific activities that occurred within the various permutations of the PRPC and PDSP. In fleshing out these activities, this portion of the chapter will use data that are primarily of a spatial/architectural nature, but will also draw upon theory from diverse areas such as

[1] Due to its generally poor condition and a lack of compound-specific excavation, Compound V is excluded from the discussion unless noted otherwise.

performance theory (Inomata 2003), cognitive anthropology, proxemics (Tuan 1999; Hall 1959, 1966), and the influence of the built environment upon human behavior (Rapoport 1969, 1982). Conclusions drawn within this chapter are critical toward examining the sociopolitical organization of Jatanca – the goal of Chapter 8.

Internal Compound Activities

Identifying internal compound activities within Jatanca has proven to be exceedingly difficult due to several factors such as the amount of sand that covers the surface (see Chapter 2); the poor context of the surface remains (see Chapter 3 and 4); and the relative "cleanliness" of the floors as encountered during excavation (see Chapter 5). As a result, defining internal compound activities will rely heavily upon the analysis of the distribution of space and architecture. This discussion will be further augmented by examining and incorporating spatial/architectural analogues from other North Coast sites that utilized compound-style architecture – especially those where the preservation of surface material context and sub-surface excavation data are superior to that associated with Jatanca. While it must be admitted that argument from analogy such as this has its problems, and that analogous sites must be selected judiciously, by identifying the spatio-architectural signatures of compound-based activities such as storage, or large-scale production at other North Coast sites, one can then examine Jatanca for the potential presence/absence of similar patterns.

Despite the lack of data, without a doubt, the rooms within the compounds that make up the architectural core of Jatanca housed a multiplicity of activities, both ritual and non-ritual, undertaken with varying degrees of intensity that may have changed over time (both long and short-term). For example, architectural evidence that might indicate a long-term change in room function can perhaps be seen in the use of the traffic altering plugs within Compound I that greatly increased internal compound privacy within Zone 4 (Chapter 6). It could also be argued that the general lack of constructed features such as platforms, ramps, benches, and *depositos*, within many compound rooms, and perhaps even the large north plazas, indicate that they were "multi-purpose rooms," the function of which could be modified in an expedient manner as needed. By comparison, rooms with a multitude of constructed features, such as the PRPC Complexes and PDSP Complex could not be modified rapidly and had a specific, perhaps unalterable function that revolved primarily around political and ritual activity (see below). Perhaps most importantly, identifying the kinds of activities (storage, production, domestic occupation), the level at which they were organized (household, compound-specific, site-wide), and where they were conducted (inside or outside the compounds) has important implications as to the sociopolitical organization of Jatanca (see Chapter 8).

Internal Compound Activities: Residential Occupation

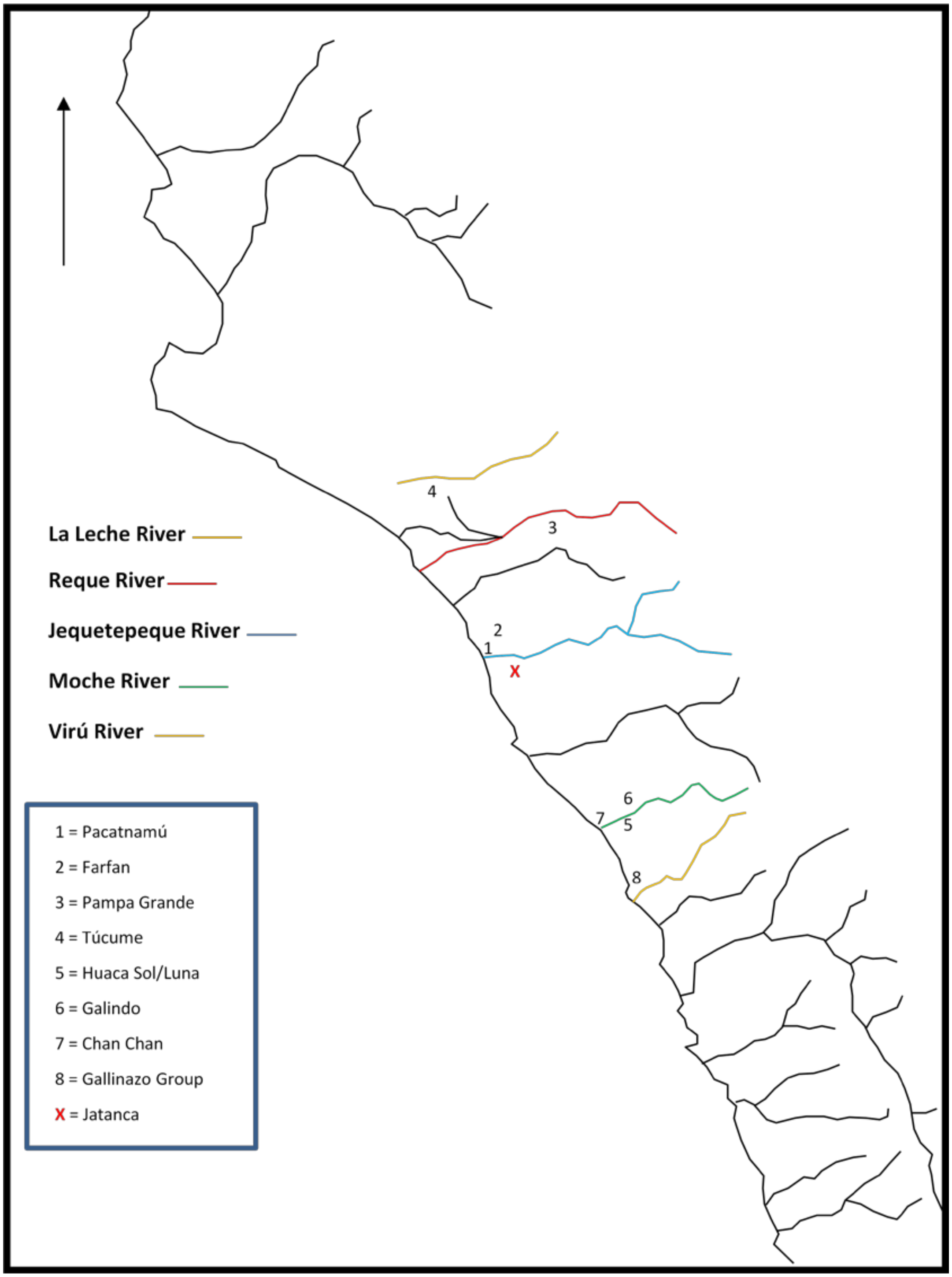
As Chapter 5 makes clear, some of the rooms within the large compounds were used for residential purposes. A small domestic unit was excavated within Compound I/Unit #1. Beyond this single relatively unambiguous example, however, little direct evidence of domestic occupation within the compounds exists. There is, however, some indirect evidence that at least some of the compound rooms were used for domestic purposes. For example, excavations in Compound I/Unit #3 revealed the presence of a possible midden that contained sizeable amount of domestic debris including ceramics, shell, and bone. Furthermore, the few ceramic fragments found in reliable context within the compounds (i.e. Compound I/Unit #4) were almost always of a vernacular, domestic nature with little in the way of any surface treatment or embellishment (see Chapter 4).[2] Finally, burn marks on tapia floors within units CII/U#2 and CII/U#3 (see Chapter 5) indicate that small fires were built within these rooms. The diameter of these discolored areas is generally only about 20cm – the same approximate size as the mouth of the hearth basin found within CI/U#1. Unfortunately, no debris such as bone fragments, botanical matter, or broken, soot-covered ceramics were found in association with these features that might further indicate their having been domestic in

[2] During the 2008 field season, numerous finewares were uncovered within an extension of Compound I/Unit #1 originally excavated in 2004/2005(see Swenson, Chiguala, and Warner 2009; see also Chapter 4).

nature. Therefore, that the fires were constructed for ritual purposes is also a possibility, albeit, unlikely. Therefore, based upon the direct and indirect evidence, there can be little doubt that at least one of the functions of the compounds was to provide housing for at least some of Jatanca's constituents.

However, the *degree* to which the compounds provided space specifically for residential purposes appears to be somewhat minimal when additional excavation data are considered. Three subsequent field seasons (2007-2009) consisting primarily of large-scale excavation that resulted in the clearing of entire rooms of varying size has yet to uncover unequivocal evidence of domestic occupation such as that found within CI/U#1; formal hearth pits, sleeping benches, and depositos (see Swenson et al. 2008, 2009, 2010). That the Jatanca compounds were not the loci of a major domestic occupation can perhaps be further substantiated by comparing them to Terminal Formative Period compound-style architecture that did function in a primarily residential capacity. The vast majority of the compounds visible today within the Gallinazo Group (V-59) in the Virú Valley (Figure 7.1; see also Chapter 2) were constructed of what Bennett described as "settlement clusters" (Bennett 1950). These clusters were a series of small, agglutinated rooms (as many as 30,000) arranged in a grid-like pattern that served primarily as domestic residences for the Gallinazo Group's large constituent population (Bennett 1950). These compounds surrounded several pyramids of varying size (Bawden 1990; Bennett 1950, Willey 1953).

Figure 7.1 – Major Sites Mentioned in Chapter



In general, the compounds that make up the Gallinazo Group have an organic, repetitious, "unplanned," or "Honeycombed" spatial arrangement, indicating that they grew out of an informal process of accretion driven by the need to claim and partition open space into areas suitable for domestic residence (Bawden 1990). Evidence that these agglutinated room blocks provided space for domestic activities is clearly demonstrated by the presence of undifferentiated kitchen ash, hearths, and abundant domestic debris within almost all of the rooms (see Bennett 1950). This distribution of domestic debris might also argue that each room was a discrete residential unit and not part of a multi-roomed dwelling (Bennett 1950; Bawden 1990). Finally, excavation within V-152b (see Figure 8 in Bennett 1950) has revealed that there were multiple building phases beneath the surface architecture indicating that occupation within many of these domestic clusters spanned centuries (Bawden 1990; Bennett 1950, Willey 1953). To sum, it could be argued that the very form of the compounds that comprise the architectural core of the Gallinazo Group are largely the result of their use as a loci of domestic activity.

In contrast, the compounds that make-up the architectural core of Jatanca are well-planned, orderly, and were not constructed via an *ad-hoc* process such as the conscription of space for an expanding domestic population.; i.e. the construction of the compounds within the architectural core of Jatanca were not the result of accretional growth, but were instead well-planned. The consistent variability in compound room size, or the lack of room-size repetition noted at V-59, might also indicate that there is a significant difference in overall compound function. Even a casual comparison of the compounds at Jatanca and the Gallinazo Group reveals that those at Jatanca are generally much larger than those within the Virú Valley site. In fact, the one example of a domestic unit within Jatanca (CI/U#1) was found entirely within a 2m x 2m unit – a size that would fit in well with the domestic units that make up the majority of the compound architecture within V-59 (see Bennett 1950). Finally, as mentioned previously, the general lack of both domestic debris and furniture such as benches and hearths further underscores the lack of significant domestic occupation within the walled compounds of Jatanca.

That Jatanca's large compounds were not used primarily for domestic occupation would seem to be a typical pattern along the North Coast based upon data from other sites where compound-style architecture was utilized. At the site of Túcume (Figure 7.1), located to the north within the Lambayeque valley numerous massive compounds were used in defining the site's core (Heyerdahl et al 1995). Excavations within these massive enclosed compounds such as *Huaca Larga* have demonstrated that the space was not typically apportioned for domestic residence, but were instead used for overseeing the production of luxury goods, large-scale food preparation, housing the elite faction of the site, and providing a location for ritual activities on a varying scale (Heyerdahl et al. 1995). The situation is the same at Pacatnamú (Figure 7.1) Activities within the Major Quadrangle of the Huaca 1 Complex were similar to those within Huaca Larga and consisted of administration (as evidenced by the presence of *audiencias*), burial (as evidenced by the H1M1 mound), and large-scale food preparation. According to Donnan (1986), however, the majority of the space within the Major Quadrangle was devoted to ritual activity conducted at varying scales. Within the eastern portion of the compound, evidence that at least a portion of the compound was used for domestic residence by a non-elite class, or "support population" for elite activities was discovered (Donnan 1986). Their activities, however, appeared to have taken up a relatively small portion of the entire complex. Also within the Jequetepeque Valley is the multi-component (Lambayeque, Chimú, and Inca) site of Farfan, the core of which is made up of six elongated compounds, or "palaces," that are distributed over a north-south axis some four kilometers in length and were "multifunctional residences of elite administrators" (Mackey 2006; Keatinge and Conrad 1983). Therefore, these compounds functioned in a number of capacities such as administration, storage, ritual, and burial. To date, evidence that indicates the presence of a support population has yet to be found (Mackey 2006). One thing is clear, however; support populations were not living within the interior of these compounds (Mackey 2006; see also Keatinge and Conrad 1983). Finally, the massive compounds, or *ciudadelas* that make up the most visible portion of the urban core of Chan Chan functioned in a similar manner; they served as points of administrative power and housed activities that revolved around mortuary, storage, and ritual (Conrad 1982; Day 1982; Klymyshyn 1982; Mackey 2006; Mackey and Klymyshyn 1990; Moselely and Mackey 1974; Topic 1982). While some support personnel lived within the walls of the ciudadela, the vast majority lived within barrios that clustered around the exterior compound wall (Topic 1982).

As stated in Chapter 3, based upon the distribution of surface ceramics, it appears as though the vast majority of the population lived within the area that immediately surrounds the Je-1023's architectural core, and not within the compounds themselves. This hypothesis is further supported by the lack of features such as small rooms, *depositos*, benches, and hearths encountered during excavation. Comparing the form of monumental architecture within Jatanca to the Gallinazo Group, a site where the majority of the visible compounds are the result of informal, accretion-based construction episodes, and other North Coast sites, where domestic occupation was not a major function of large-scale compound architecture, further underscores the general lack of domestic activity that occurred within the major compounds. That is not to say that there are not exceptions to this patter, as is discussed below for the elite residences at the Sol/Luna site.

Internal Compound Activities: The Production of Goods

Based upon surface and excavation data from Jatanca (Swenson et al. 2008, 2009, 2010; Warner 2006), it does not appear as though the production of durable goods such as metal, ceramics, or textiles was an activity that was emphasized within Jatanca's compounds. The bi-products of such large-scale manufacture, such as wasters, raw materials, molds, blast furnaces, unfinished products, and spindle whorls have yet to be located despite having excavated in numerous compound rooms of various size and location.

Other North Coast sites such as the slightly later (Early Intermediate Period) Huaca del Sol/Luna and Pampa Grande (late Early Intermediate Period) are made up of large compounds that served numerous functions such as elite residence, loci of manufacturing activities, and subsequent storage (see below). Excavations conducted by Chapdelaine (2001) at Sol/Luna revealed that internally complex compounds were used for multiple purposes such as elite residence, and the manufacture of objects made of ceramics, metal, and textile. Other compounds may have been involved in other economic specialties such as equally specialized in activities such as fishing, camelid husbandry, and chicha production (Chapdelaine 2001). In terms of their spatial arrangement, it is possible that the compounds were loosely grouped based upon by their specialty, with the result being that like specialties tended to cluster together (Chapdelaine 2001).

Architecturally, these compounds share some broad similarities with Jatanca such as restricted internal access, the use of confusing, narrow passages and sealed doors, which are argued by Chapdelaine (2001) to indicate an increasing need for privacy within the compounds. In addition, compound architecture is oriented in the same general direction – in this case along an east-west created by the opposing Huaca del Sol and Huaca de la Luna (Chapdelaine 2001, 2006).

There are, however, numerous dissimilarities between the compounds used at both sites. First of all, the compounds at Sol/Luna have a much higher number of rooms of varying shapes, sizes, and access patterns than those within Jatanca, giving the architecture a far more "organic" look than the relatively "rigid" room design, size, and linkage patterns associated with Je-1023. For example, Compound 9 within the Sol/Luna site is made up of more than 40 rooms of different size and shape. The compound has a long, complex history that spans more than 200 years (Chapdelaine 2001). At least 9 of the 40+ rooms that make up Compound 9 were enclosed, rectilinear in form, and used for storage, which might imply that the productive capability of the complex exceeded household needs (see below as well). Furthermore, elite residences (n>30) almost always have a single, large, attached room that Chapdelaine (2001) speculates could have been used for feasts, or for the display of wealth items as evidenced by the amount of non-utilitarian items made of gold, silver, and copper that have been recovered. Finally, it appears as though the entire Eastern Unit of Complex 9 was used to produce chicha (Chapdelaine 2001).

Based upon the above description, the internal partitioning and organization of space at Sol/Luna, where the production of goods was an integral aspect of space apportionment, differs from that at Jatanca. At Sol/Luna, there is a well-defined nested order to the spatial divisions that can be found within most of the compounds: Compounds are made up of numerous complexes; complexes are made up of several smaller, but integrated sub-units; and sub-units are made up of individual rooms of varying sizes and shapes, many of which had unambiguous functions such as storage, domestic activities, and the supra-complex production of specialized products (Chapdelaine 2001). Therefore, there are at least four repetitious levels of spatial/architectural patterning at Sol/Luna: compound, complex, sub-unit, and room. While one cannot argue that the entirety of this nested spatial system is the exclusive result of the need to provide space for the large-scale production of goods, it could be argued, nonetheless, that it was a highly significant factor in internal compound form – especially at the level of the sub-unit (Chapdelaine 2001). By attaching the sub-unit of production directly to the sub-unit of domestic activity (and storage – see below) via a shared wall, production could be easily overseen by the Complex's inhabitants, all while having some of the unwanted by-products of the production process (i.e. noise, odors, etc…) mitigated by the shared wall. This is clearly not the case at Jatanca where this particular nested division of space noted for Sol/Luna is largely absent. While the Jatanca compounds can be broken down into sub-groups such as zones, CLCs, and annexes, these are relatively large groupings and the presence of additional examples of smaller nested architectural patterns are not readily apparent.

Finally, as noted in Chapter 5, excavations in Jatanca have generally revealed well-cleaned floors with almost no debris of which to speak – let alone debris associated with the large-scale production of goods such as that encountered by Chapdelaine (2001, 2006) within the Sol/Luna site. Features such as post holes, "dimples," and small burned spots are encountered (Swenson et al. 2008, 2009, 2010; Warner 2006), but not much else. While these features might indicate ceramic or chicha production, it does not appear to have been on an organizational scale such as that found at Sol/Luna. In addition, ethnobotanical analysis (Vasquez and Tham 2006) failed to identify the presence of significant amounts of maize impressed within occupation floors that might indicate that some of the compound rooms were used for the large-scale manufacture of *chicha*.[3] Therefore, the meager amounts of artifacts, ecofacts, and the architectural/spatial data indicate that the large-scale production of goods was not a significant activity that occurred consistently within the walls of Jatanca's compounds.

Given the dense accumulation of debris that surrounds Jatanca's architectural core (including ceramic wasters, *ralladores*, and grinding stones, it seems likely that production, be it small or large-scale, was more likely to have occurred within this perimeter zone – a situation similar to that at the Late Intermediate Period Chimú sites of Chan Chan, where the production of goods made from raw materials such as ceramics and metal occurred within the SIAR (small irregular agglutinated rooms) that surrounded many of the *ciudadelas* (Topic 1982).[4] The storage of finished products and comestibles (see Kolata 1990), however, was a major activity that took place within the *ciudadelas*. The possibility that storage was a major activity that took place within Jatanca's compounds is discussed next.

Internal Activities: The Storage of Goods

The degree to which any of the Jatanca compounds served as a centralized large-scale repository for the storage of goods such as comestibles or finished luxury goods such as pottery, metalwork, or textiles is also somewhat questionable – especially in light of the excavation data and architectural analogues of storage facilities from other North Coast sites such as Sol/Luna (Chapdelaine 2001, 2006), Chan Chan (Moseley and

[3] This is still the case today as three subsequent seasons of fieldwork have yet to result in the ethnobotanical identification of significant amounts of maize within compound floors, despite having opened up much larger units (see Swenson, Chiguala, and Warner 2008, 2009, 2010).

[4] A similar situation has been noted at the Late Intermediate Period site of Manchan located in the Casma Valley by Mackey and Klymyshyn (1990). At Manchan, production was concentrated within perishable cane structures that surrounded the formal compound architecture.

Mackey 1974; Moseley and Day 1982), Manchan (Mackey and Klymyshyn 1990), Pacatnamú (Donnan and Cock 1986), Pampa Grande (Shimada 1994), Huaca A at Pampa de las Llamas[5] (S. Pozorski and T. Pozorski 1987) and Túcume (Heyerdahl et al 1995). Architectural indicators of storage within monumental buildings are common at other North Coast sites and can be used as an analogue to potentially identify storage at Jatanca.

As discussed in the above section, considerable storage activity occurred within the compounds of the Sol/Luna site as many of the complexes were made up of nested subunits that contained rooms used for storage. Rooms used for storage were identified based upon the presence of highly restricted access, relatively small size, replication of size, agglutinated placement, and the lack of a doorway that gave them a "bin-like" appearance (Chapdelaine 2001 - see figure 5). The *ciudadelas* of Chan Chan also contained numerous rooms[6] that have been identified as having been used for storage (Day 1982). In general, these storerooms are similar in size (between 2 and 4 meters square), arranged in contiguous rows around an open court that ultimately creates a "U" shaped pattern, and found in clusters (Day 1982 Moseley and Mackey 1974). In addition, as with the bins at Sol/Luna, they too have a low wall (approximately one-meter high) across their entrance that gives them a bin-like appearance (Day 1982). At the site of Pampa Grande (Shimada 1994), three levels of storage were identified ranging from the household up to large-scale facilities that were used by the state to store comestibles and non-comestibles such as raw materials and finished products. Those associated with the state were located within tightly-controlled areas that were accessible only after first passing through a series of restricted points (Shimada 1994). More specifically, some of the storage features were associated with areas of craft production, while others were associated with ramp./platform structures (Shimada 1994). Physically, storage was undertaken within

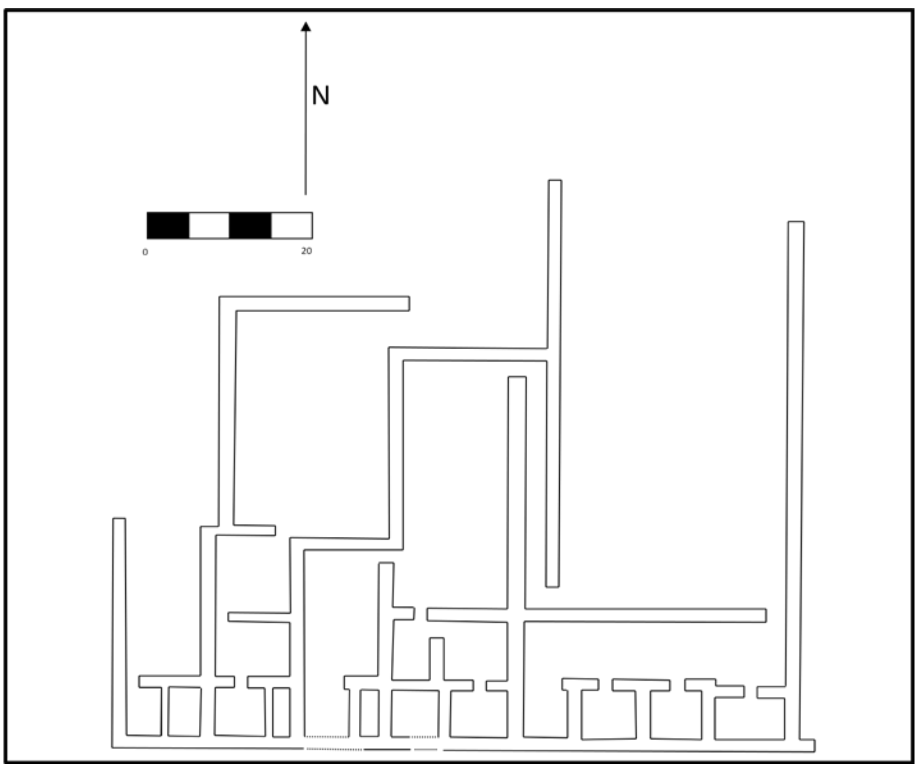
[5] Quilter (2001) argued that Huaca A may have been used more for ritual activity due to the cleanliness of the rooms, and their shared similarity in form with those associated with the Highland Kotosh Religious Tradition.
[6] Total storerooms for all Chan Chan *ciudadelas* = +2300 (see Klymyshyn 1987; Kolata 1990).

two rows of contiguous bins that were standardized in their shape (square or rectangular), construction, and material used. All of these bins had a high threshold, thick interior plaster on the floor and walls, and a thick mortar-sealed roof that indicated there was concern with control over natural elements and with keeping pests out of the bins (Shimada 1994). Although few clues as to what the bins contained were recovered, miniscule amounts of bean and corn was recovered from some of the bins.

Several spatial/architectural patterns emerge when examining the above examples. Generally storerooms are of a relatively small – almost “predictable” size. Rooms used for storage tend to be found in agglutinated configurations (grouped around the perimeter of a courtyard, or in lines), with access to them tightly controlled (but see also Mackey and Klymyshyn 1990). Storerooms also have a small wall that partially blocks the doorway so as to give the room a more “bin-like” quality. In some case, storage rooms are also found in conjunction with other architectural features, such as the *audiencias* at Chan Chan (but see also Moore 1996), domestic sub-units such as is the case at Sol/Luna (Chapdelaine 2001), or ramp/platform features and production areas such as at Pampa Grande (Shimada 1994). Indeed, it could be argued that the centralized storage of finished goods and/or comestibles seems to have been a fairly common function of large-scale, compound-based constructions throughout the North Coast area.

At Jatanca, as with most other North Coast sites, direct evidence of large-scale storage such as the materials themselves has yet to be encountered (Swenson et al. 2008, 2009, 2010; Warner 2006). Furthermore, from an architectural perspective, it does not appear as though large-scale storage was a function of the major compounds as no agglutinated clusters of small, similar sized rooms have been identified within Compounds I-IV. Furthermore, none of the rooms have a low wall that partially blocks their entry and gives them a more “bin-like” appearance. In addition, no aggregations of containers suitable for storage, such as large *tinajas*, have been recovered from within Jatanca’s architectural core (Swenson et al. 2008, 2009, 2010; Warner 2006). Interestingly enough, however, a similar replication of this spatio-architectural pattern can be found within Compound VI (Figure 7.2), which is located approximately 200 meters to the northwest of Compound IV, isolating it somewhat from Jatanca's architectural core. This compound has 12 rooms of approximately the same size grouped along its south wall. With the exception of the two western-most rooms, access into these small rooms is restricted via the utilization of a series of baffles. Long walls are used to partition the various storerooms into zones making direct access into storerooms from storerooms within another zone impossible. In addition, the southern-most rooms are somewhat "bin-like" as most have either a restricted, narrowed access, or lack a formal entry altogether.

Figure 7.2 – Compound VI



This compound may have a functional analogue at the site of Galindo where Bawden (1982) identified architecture-based storage activity within what he termed, "Mixed-Function" architecture – a combination of domestic residence, llama herding facility, and point of redistribution – located within a residential area. Storage took place within this structure as evidenced by a series of approximately 1.5 meter X 1.5 meter bins organized in rows along the southwest wall. Additional storage bins abut interior benches, and all are divided into controlled zones via the use of long walls that prohibited free movement among the bins. In other words, just because a person had access to bins within one zone, does not mean that they were able to freely access bins in an adjacent zone (see Bawden 1982: Figure 12.9). As the bins contained trace amounts of comestibles such as corncobs, seeds, shell, animal bones and fragments of large vessels, Bawden (1982) argued that this structure served as an official point of economic redistribution.

Excavations within the bins of Compound VI did not reveal the presence of any comestibles or durable goods (see Chapter 5). Nonetheless, the degree to which this structure parallels the architectural and spatial form of the "Mixed Function" structure at Galindo is compelling and might indicate that it functioned in a similar way - as a point of storage and redistribution - the exact nature of which is difficult to determine – combined with a domestic component (see Chapter 8). Unfortunately, additional work at this structure during the 2007 through 2009 field season has not been possible due to the presence of barchan dunes which have completely buried the compound. It is hoped that during upcoming 2010 field seasons this structure can be further excavated in the hopes of identifying a domestic component within the northern sector, or the presence of trace elements of comestible within the bins themselves.

It is also possible that large-scale storage did not take place within the compounds, but within a controlled area external to the core of the site. At Galindo, the most readily visible form of storage occurred within two designated areas located near the large compound architecture (Bawden 1982, Lockard 2005, 2008). Storage here took the form of small stone structures that housed a series of small, interconnected rooms (usually five or less). While there was a considerable amount of internal architectural variation, in general, the agglutinated structures displayed "…an aspect of overall uniformity" that "…strongly suggests a specialized function" as a point of corporate storage (Bawden 1982:304). Access to these structures is tightly controlled via the utilization of formal points of administrative control (*Cercadura* C), the construction of a limited number of pathways, and the natural topography. Eling (1987) noted that farmers within the Pampa Mojucape region stored large amounts of comestibles within ceramic vessels that were buried beneath the sand within clusters. While not to overextend the direct historical approach, it is possible that the inhabitants of Jatanca used a similar pattern of storage, taking advantage of the periodic sand dunes that moved across the area.

Certainly some storage occurred within the centrally located compounds. Some small-scale storage was identified within Compound I/Unit I in the form of the small *deposito* located within the southwest corner of the principle room (see Chapter 5). In addition, it is possible that large-scale storage could have taken place within Compound I/Zone 5 which could have been used to store bulky, low-value items within portable containers such as *tinajas*.[7] However, this possibility remains pure conjecture due to the lack of supporting artifacts, ecofacts, and architectural patterning. Therefore, based upon current information and architectural analogues from other North Coast sites, it seems somewhat unlikely that storage was a significant activity.

Internal Activities: Provide Space for Burial Depository

The Jatanca compounds do not appear to have been the loci of significant burial activity such as was the case at other North Coast sites such as Galindo (Bawden 1982), Pacatnamú (Donnan and Cock 1986), Farfán (Keatinge and Conrad 1983; Mackey 1990, 2006), or Chan Chan (Moseley and Day 1982). At the site of Galindo, Bawden (1982) noted that within the *cercadura* compounds there were large, badly-looted rectilinear

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[7] An example of this type of "open" or easily accessed storage can be found at the site of Manchan, a Chimú site located in the Casma Valley. Mackey and Klymyshyn (1990) argued that there were two fundamental patterns of storage access within the compounds that make up the Late Intermediate Period site: relatively closed and relatively open. They argue that bulky comestibles extracted from the local economy were placed into easily accessed compounds for short periods of time while they awaited transport to the Chimor capital, Chan Chan. Unfortunately, Mackey and Klymyshyn do not provide any additional information as to the physical form of the storage bins.

mounds that likely housed the corpses of at least some of the inhabitants of the site. At Pacatnamú, Donnan and Cock (Donnan 1986) mapped and excavated a large rectilinear structure (H1M1) that contained large amounts of human bone, some ceramic finewares, and textiles within the southeast corner of the Main Quadrangle. Based upon the presence of these materials, Donnan hypothesized that H1M1had served as a likely repository for human remains for at least some of the inhabitants of the Major Quadrangle. At the site of Farfán, Keating and Conrad (1983) noted the presence of a large rectilinear mound within the center of Huaca II, and hypothesized that it had at one time contained the body of at least one of the rulers of the site – perhaps the conquering General Pacatnamú himself. Finally, at the site of Chan Chan, rectilinear burial mounds were identified in association with 8 of the 9 *ciudadelas* (Conrad 1982). Access to the summit of these mortuary mounds was made via large ramps that were incorporated directly into the mound. These mounds were considerably larger than the above examples and contained space adequate for the deposition of numerous retainers and perhaps family members as well.

Despite variations in size and being somewhat dispersed over time and through space, all of these examples of mortuary architecture share some important features. They are all located within the interior of walled compounds, relatively far from the entry, making them relatively inaccessible. Generally, they can be accessed only after only first passing through a series of baffled entries and winding passages. The burial architecture is freestanding and has a rectilinear form. Finally, the surface of the mortuary architecture is elevated to varying degrees above surrounding architecture.

Compounds II and III in Jatanca have quadrilateral-shaped, low-lying mounds that are elevated above the surrounding architecture and located in a similar spatial position – far from the formal entry and accessed only by after passing indirectly passing through a series of corridors and baffled entries. However, unlike the examples discussed above, they do not appear to have served any kind of a mortuary function. The southern portion of the mound within Compound II was excavated in 2007 (Swenson et al. 2008) and was found to contain a well-finished empty room with no formal entry. A small sub-unit placed within the floor of this room revealed the presence of a lower, well-finished wall indicating that the "mound" was a later addition, the result of later construction and had probably not been built at the time of the original compound construction (Swenson et al. 2008). Unfortunately, the lower wall became so tightly bonded to the fill that had been used to elevate the floor of the mound that it could not be followed down to its point of termination (Swenson et al. 2008). Nonetheless, neither the aerial excavation of this zone, nor the sub-unit placed within the middle of the floor revealed any evidence that this mound served any kind of a mortuary function.

The situation is much the same with regard to the mound in Compound III. The southern portion of this area was excavated in 2008, revealing the presence of PDSP Complex and the associated dais room. There were several large, deep holes in both the platform and the floor of the dais room that had been made in the immediate past by looters. These intrusions were cleaned out and followed down to their point of termination – in some cases well over three-meters in depth, or to the level of the surrounding desert pan (Swenson et al. 2009). All of the loose sand removed from these units was screened through a fine-mesh screen in an effort to recover any broken and/or discarded artifacts or human bone. Close scrutiny of the profiles and the screened backdirt revealed no evidence of burial such as human bone, or empty chambers (Swenson et al. 2009). Furthermore, it is of interest to note that unlike the mound in Compound II, no sub-floor walls were exposed by the extensive looting activity – the walls and floor that make up the PDPS Complex are situated on a base of pure sand (Swenson et al. 2009).

While the major compounds (Compounds I-IV) show no evidence of ever having been used as significant repositories for the deceased, it must be mentioned that there is evidence that the Acropolis was used in such a manner. As discussed in Chapters 3, 5, and 6, the southern sector of the Acropolis has been elevated via the incorporation of a stabilized sand dune, resulting in a mound form, the pinnacle of which is some 8 meters above the surrounding pampa surface (see also Dillehay and Kolata 2004). Numerous human bones have eroded from the hillside of this sector along with examples of ceramic finewares, many of which date to the Middle and Late Formative Period (see Chapter 4). The exact chronological significance of these burials has yet to be determined as the context between the human bones and ceramics is specious at best.[8] However, the degree to which the Acropolis was used for mortuary purposes or as a repository for important ancestors remains undetermined at this point in time.

Despite having opened up some35+ units over the course of three extensive field seasons, excavations within Jatanca's compounds have yielded only one burial to date[9] (see Swenson et al 2008). Therefore, the lack of burials in addition to the lack or architecture typically associated with compound burial activity makes it unlikely that Jatanca's compounds served as a *significant* final resting place for any social segment of the constituent population.

Internal Compound Activities: Summary

To date, with the exception of some domestic occupation, little direct evidence such as artifacts or features that might indicate the function of rooms within the major compounds has been excavated. As with other North Coast sites such as Pacatnamú (Donnan and Cock 1986), hard compound floors were kept relatively clean. Features such as storage rooms, formal hearths, benches, niches, etc…. are also generally not found within the compounds, resulting in a series of rooms undifferentiated by much other than their position in the chain of access, physical location, and size. This is not to say that activities such as occupation, storage, production, and mortuary activity did not occur within the walls of the compounds. In fact, the presence of canals that run though Je-1023 (see Chapter 3) along with ethnobotanical data (see Chapter 5) would imply that agricultural production, and by extension long and short-term storage and

[8] A portion of this area is scheduled to be tested in the summer of 2010.

[9] This burial was of a single female between 20-30 years of age at death that had been buried in isolation within a medium-sized room in Compound II. No grave gods were associated with the burial. It seems likely that the burial was itself an offering and not part of a broader mortuary pattern of intra-compound interment (see Swenson, Chiguala, and Warner 2008)

post harvest-processing, were important activities undertaken by the site's residents throughout the course of any given year. However, direct evidence (either architectural or ceramic) that would indicate the presence of these activities having occurred within the compounds is currently lacking.

A final possibility that must be considered is that the lack of evidence related to functional-based compound activities such as storage and production is due to the site having been built and then abandoned relatively rapidly before significant occupation could occur. However, the carbon dates recovered during excavations conducted by both this project and Proyecto Jequetepeque (Dillehay and Kolata 2004) would seem to argue against this possibility. The construction of the Acropolis occurred approximately 200-300 years before that of the major compounds (see Chapter 5) all of which appear to have been constructed and occupied contemporaneously. Furthermore, the sequence of dates recovered from CI/U-1, which span just over 100 years, along with the distribution of dates between the compounds themselves, which span approximately 150 years would seem to argue against this scenario.

To sum: while there can be no doubt that in addition to domestic occupation other functional-based activities such as the production and storage of foodstuffs, along with social diversions such as entertainment also occurred within the confines of the compounds, the evidence of these activities is lacking. In addition, it does not seem to be likely that this lack is due to the relatively rapid abandonment of Jatanca just after the completion of compound architecture.

There is, however, one exception to the above generalization; the use of ramp/platform features in association open plazas of varying size may indicate that at least one major function of the compounds was to provide space for ritual and political activity (see Chapter 8). These complexes dominate the interior of all of the major compounds (along with Compound V) and are positioned within places of relative prominence; within the compound entry and within more private, interior locations. The first step in this process is to briefly define what is meant by ritual and explicate the relationship between its performative aspects, scale of production, human sensory limitations, and architectural considerations.

Ritual Performance and the Plaza/Ramp/Platform Complex

Based upon consistent architectural patterning, proxemics analysis, and archaeological data (see also below) one major activity that was conducted within the compounds seems readily identifiable - that of ritual/ceremonial[10] activity. According to Tambiah (1972), ritual can be defined as:

> "…a culturally constructed system of symbolic communication. It is constituted of patterned and ordered sequences of words and acts, often expressed in multiple media, whose content and arrangement are characterized by varying degrees of formality (conventionality), stereotypy (rigidity), condensation (fusion), and redundancy (repetition)."

While several aspects of this definition are of importance, what is most important at this juncture is Tambiah's emphasis upon the communicative, performative qualities of ritual activities. From this definition, archaeologist Jerry Moore (1996) draws the following four-point logic string that connects performative-based rituals with their architectural setting:

Point 1 – Ritual ceremony is a form of communication

Point 2 – Communication is shaped by a wide range of variables, but is fundamentally limited by the threshold of human perception.

Point 3 – Different rites involve distinct sets of perception as they appeal to different sized audiences and transfer information of various levels of detail and complexity.

Point 4 – Ceremonial architecture spatially and materially reflects those different social contexts and ritual patterns.

[10] The terms "ritual" and "ceremonial" are used interchangeably.

By their very nature, rituals such as those associated with fertility, cosmogony, mortuary rites, ancestor worship, etc… are intended to convey information via symbolic communication (Inomata and Coben 2006). At the very least, rituals are concretized through symbolically-charged spectacle that is inherently communicative by definition. Information can be coded for conveyance in a myriad of ways from simple recitation to elaborate, heavily-staged reenactments (Inomata and Coben 2006). While the variables involved in the conveyance of symbolic communication during ritual activities are many, among pre-industrial cultures along the North Coast, symbolic communication via performance was limited greatly by the sensory perceptions of both the sender and receiver (Hall 1959; Moore 1996). Beyond certain average limits, natural thresholds in sensory perception prevented effective communication be it in the form of a literal recitation or a highly symbolic performance (Hall 1959; Inomata and Coben; Moore 1996). For example, as the distance between the sender and receiver increases, the amount of detailed verbal information that can be exchanged decreases, necessitating the use of alternate forms of symbolic communication (Hall 1959; Moore 1996). Other factors that can have an impact on how ritual is effectively staged during ceremonies include the size of the audience, the presence/absence of ambient noise, and the spatio-architectural arrangement of ritual architecture (see Inomata and Coben 2006; Moore 1996). The combination of the above limiting variables results in the development of an appropriate cross-section of "sets of perception" geared specifically to situate various theatrical fields of varying detail to a range of audience sizes from just a few, to as many as several thousand. Therefore, the spatio-architectural design of ritual spaces at least partially reflects a given group's needs to effectively communicate during ritual activity in the face of the above variables (Hall 1959; Inomata and Coben 2006; Moore 1996).

According to Moore (1996), by viewing ritual as a communicative process, archaeologists are able to use ceremonial places as a means of examining themes related to the identification of ritual architecture, the categorization and function of ritual architecture, the form of the rituals that were conducted within, and the organization of broader sociopolitical organization (see Chapter 8; see also Inomata and Coben 2006). It is to these themes that this research now turns, beginning with demonstrating that the partitioning of space for ritual activity was a major compound function.

The Physical Dominance of the Northern PRPCs

As will be argued throughout the remainder of this chapter, a major function of the Jatanca compounds was to provide a stage-like setting designed to effectively present the ritual and political activities that occurred within the replicated, nested PRPCs. Providing a designated space – or backdrop - for these activities was a major compound function, more so than the above discussed domestic occupation, craft production, or storage.

One necessary step in demonstrating the functional emphasis on political and ritual space is to examine the amount of compound area that was devoted to the large north plaza complexes. For example, by percentage, the Primary PRPCs in compounds I-IV and the PRPC Variant within the Acropolis physically dominate the total area of their respective compound (Table 7.7). This table demonstrates that the PRPCs within the north plaza make up between 22% (Compound I) to 51% (Compound III) of the total compound area. It should be kept in mind that while the low end of the range is 22% of the total compound area, this occurs within Compound I, which has by far the largest PRPC (3086m2) by total area. The presence of the large, somewhat anomalous Zone 5 annex (Chapter 6) considerably reduces the percentage of total space devoted to Compound I's PRPC. When the area of all of the large north plaza are added, the total amount of compound (Acropolis + Compounds I-IV) area devoted to the Primary PRPC throughout the site is 32% (12,368/38,680); in other words approximately one-third of the total compound space is devoted to the Primary PRPC within Compounds I-Iv and the PRPC Variant within the Acropolis.

Table 7.1 – Percentage of Total Compound Area Devoted to PRPCs and the PDSP[11]

	Acropolis	Comp. I	Comp. II	Comp. III	Comp. IV
Total Compound Area	6512m^2	13,922m^2	5605m^2	5281m^2	7360m^2
Primary PRPC Area	0	3086m^2	1476m^2	2668m^2	2658m^2
% of PRPC to Compound	38%*	22%	26%	51%	36%
Secondary PRPC Area	0	0	0	688m^2	1400m^2
PRPC Variant(s)	2480m^2	250m^2	102m^2	30m^2	0
Stair/Ramp Room	0	0	88m^2	0	0
PDSP Area	0	0	0	108m^2	0
Total PRPC, PDSP, S/R Area	2480m^2	3336m^2	1666m^2	3494m^2	4058m^2
% of line above to total area	38%	24%	30%	66%	55%

*Percentage of PRPC Variant to total compound

When the Secondary PRPCs (Compounds III, and IV), the Stair/Ramp room (Compound II), smaller PRPC Variants (Compound I, II, and III), and the PDSP (Compound III) are factored in, the percentage of total compound space devoted to theses complexes jumps to 39% (15,304/38,680). That nearly 40% of the total compound area is devoted to the Primary PRPC, Secondary PRPCs, the Ramp/Stair Room, and the PDSP underscores the important role played by these architectural complexes in terms of shaping the overall form of the compounds, and the distribution of interior space. This is especially true in the cases of Compounds III (66%) and IV (55%) where more than half

[11] Compound V has been excluded from this table due to the incomplete nature of the maps. Compound VI has been excluded due to its apparent lack of ritual space similar to that of the PRPC, or PDSP.

of the total area is devoted to the Primary and Secondary PRPCs and, in the case of Compound III, two PRPC Variants and a PDSP. By extension, it could be further argued that an additional large percentage of presently unidentified compound space was utilized at least periodically to support the activities that occurred within the PRPCs (large-scale) and the PDSP (small scale - see below).

The amount of space dedicated to the northern PRPCs is considerable and could have held large numbers of individuals participating in ritual activities (see below). It is a central tenet of this chapter that room size reflects staging needs based upon crowd size; i.e. large PRPCs were used by larger groups of people than were the smaller Secondary PRPCs, the PRPC Variants, the PDSP Complex, or the Stair/Ramp Room (but see also Baines 2006). In addition, this chapter also demonstrates that there is a relationship between effective ritual staging and room organization mediated by the size of the participating group and human limitations in sensory perception (Hall 1959; Moore 1996). In order to demonstrate these complex dependent relationships, a number of criteria must be discussed and/or demonstrated as viable:

1. The PRPCs functioned, at least part of the time, as a “theater” that hosted ritual events
2. Based upon spatial/architectural criteria, some parameters of ritual form, or lines of ritual movement can be assessed
3. The role played by inherent limits in human sensory perception in room design can be evaluated
4. The relationship between plaza occupation figures and room size, layout and location can also be examined

The PRPC Viewed as a Theater

The PRPCs are key components in the design and layout of Jatanca’s compounds (see Chapter 6). In addition, many of the non-PRPC rooms may also have been used to support PRPC activities, with the implication being that these ritual complexes were in some respects a major force in shaping the compound footprint, interior design, and layout. While the overall plan of the Primary PRPC itself could have been influenced by a number of factors such as its additional use as a formal entry (see Chapter 6) cosmological alignments, response to prevailing wind patterns (see Chapter 3), political organization, (see Chapter 8), and social memory (see Chapter 9), it was also shaped by its use for periodic ritual activities of a highly performative nature (or "spectacles" – see Inomata and Coben 2006) performed before large crowds – perhaps hundreds of people (see below). This latter use was a major variable in the development of the Primary and Secondary PRPCs final spatial and architectural configuration and the focus of the remainder of this chapter.

The Primary and Secondary PRPCs along with the PRPC Variant in the Acropolis were designed to be used periodically to augment symbolic communication among a large group of people (see below). The end result of this was a complex that is similar to a modern-day stage (or "proscenium stage") that could effectively "seize," or "focus" the attention (see Renfrew 1994) of a large "audience" gathered within the plaza to performative activities that were occurring within the elevated ramp/platform room (see below; see also Inomata and Coben 2006; Moore 1996; Quilter 2001). While I do not wish to over-extend the fundamental analogy of "the Primary and Secondary PRPCs equal a modern-day theater," some of the architectural and spatial similarities shared between the two are undeniable. In addition, the complexes allow for individual and group movement that is similarly associated with a modern theater setting (Inomata and Coben 2006). For example:

The Ramp/Platform Room (the "Stage")

Room #2 in all of the major compounds is the focal point of the plaza and served as the "stage" conducive to the transmission of symbolic communication contained within performative acts (discussed below) to an "audience" located in the adjacent plaza (Figure 7.3 and 7.4). This area was elevated approximately one-meter and therefore provided spectators in the plaza improved visual access to the events transpiring within the southern room (see also Moore 1996:215-217 for Chimú example). In addition to permitting easy access between the two, by elevating this room only a small amount, the edge of the field was well defined without breaking the visual continuity it shares with the plaza (Ching 1979). Furthermore, elevating the ramp/platform room created a "retreat" from the activities occurring within the plaza; provided a venue from which to observe activities within the plaza; and articulated a singular space within the complex that may have had sacred significance (Ching 1979).

The south wall within the ramp/platform room is especially tall and thick when compared to other walls within Jatanca. This may indicate an attempt to maximize the amplification of sound emanating from the ramp/platform room into the plaza (see Moore 1996). There is always at least one baffled entrance from the south that allows the "actors" to enter and leave the "stage" without having to have direct contact with the audience. This entrance allows "actors" (or officiates) to exit and enter the stage – perhaps as a means of heightening dramatic tension in the narrative, or ceremony (see also Quilter 2001).

Finally, this room contains two sets of ramp/platform features that were probably an important fixed part of the stage "set." Additional examples of fixed stage elements can be found at slightly later Moche sites. At the site of Cao Viejo in the Chicama Valley, and Huaca de la Luna in the Moche valley, Quilter (2001) has noted that within the main plaza, the small room/platform/ramp feature located "stage right" may have been an integral part of ritual activity, and that people may have emerged from it during predetermined (or "scripted") intervals.

Figure 7.3 – Generalized Isometric View of the Primary PRPC - Looking south (not to scale)

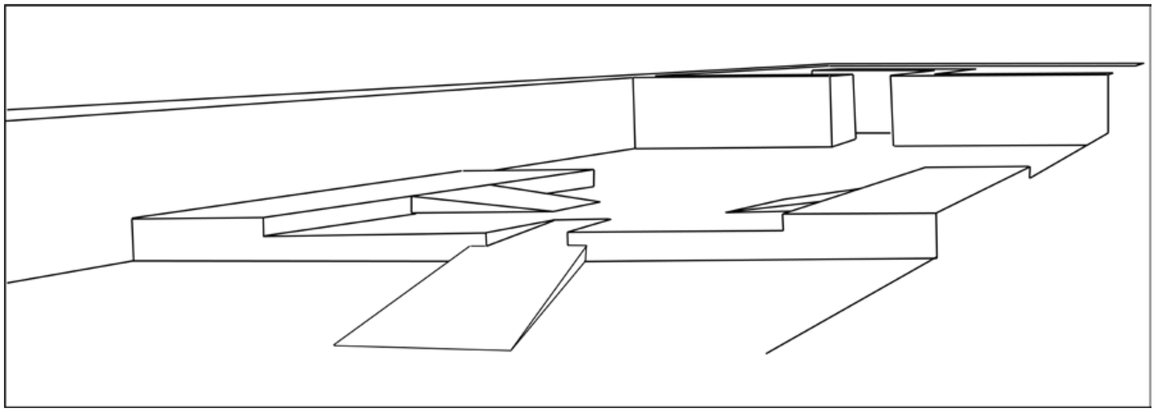
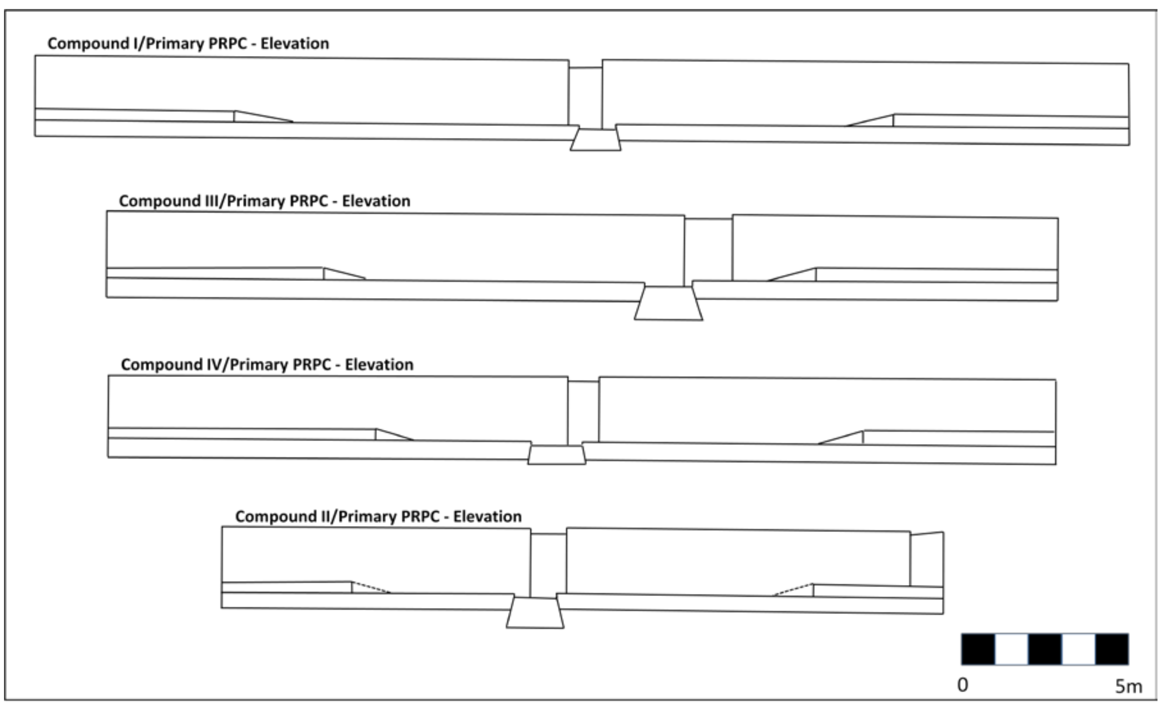


Figure 7.4 – Frontal Elevation of Primary PRPC Compounds I, II, III, and IV Looking South from Plaza



The Plaza (the "Auditorium")

The plaza is somewhat analogous to an auditorium as this area is much larger than the associated "stage" and lines of sight within the plaza are largely unobstructed, affording a full-view of activities that occurred within the elevated ramp/platform room. These rooms are easily the largest within any of the Jatanca compounds and could have comfortably held hundreds, if not thousands of people when filled to their capacity (see below; but see also Baines 2006). As with a modern theater, the PRPC plazas within Compounds III and IV (and to a lesser degree Compound II) have a slight trapezoidal shape with the narrow end abutting the stage so as to better accommodate large crowds focused upon activities in room #2, and perhaps aid in sound distribution as well. For most people, access in and out of the plaza was made via the central door in the north wall of the plaza, thereby affording those behind the baffled entry in the south wall of room #2 privacy before, during, and after ritual activities.

Private Posterior Rooms (the "Backstage")

As demonstrated in Chapter 6, all of the PRPCs have a relatively restricted area (or areas) located posterior to the ramp/platform room behind a large baffle that hides the interior of the room from those within either room #1 or room #2. These rooms could have been used at least in part as a "backstage" area that could store performance items such as "props" and/or "costumes" when not in use, provide an area for "performers" to get ready for the performance out of the site of those in the plaza or in the area surrounding the compounds, and provide space for performers to gather and await their "cue" before entering the stage area (see below). This area could also be used at the conclusion of a performance by the actors as a place to remove and store performance-specific items, again, out of the site of those assembled within the plaza.

Separate Entrances ("Stage" and "Audience" Entrances)

As with any modern-day theater, all of the PRPCs have multiple entrances around the stage area. Those in the plaza used the north entrance to gain access into the area in front of the ramp/platform room (however see Chapter 6 - Compound IV), while those directly involved in activities within the ramp/platform room could have used the baffled entry in the south wall, or other entry points such as the doorway behind the west ramp/platform in Compound I, or the additional narrow south wall entry in Compound II. In any event, access into the Primary and Secondary PRPCs could be made from two primary directions – the north (audience side) or the south (actor side). In a sense, the use of two entrances into the PRPCs has implications related to event timing as well. The ritual "actors" could enter the compound long-before the plaza-based "audience" arrived, giving them adequate time and space to prepare for the performance which may have begun with their initial appearance in the ramp/plaza room. Furthermore, the audience could assemble and wait for the performance to begin within a designated area, somewhat independent of the time involved in backstage preparation. Ultimately, by utilizing two separate entrances into the PRPC, the social/performative distance that separated the actors within the ramp/plaza room and the audience within the plaza was effectively maintained and socially reified (Inomata and Coben 2006; see also Chapter 8).

Discussion

While the layout of the Primary and Secondary PRPCs and the PRPC Variant associated with the Acropolis are remarkably similar to that of a theater, it needs to be made clear that I am in no way inferring that the two worked in exactly the same manner[12] (See Inomata and Coben 2006 for discussion). It seems likely that symbolic communication between the group in the plaza and the group in the ramp/platform room was more dynamic and less unidirectional than that associated with a "typical"

[12] There are important physical differences between the two as well; theaters typically have prearranged seating that is fixed, while the north plazas lack such features.

scripted play (see below; Inomata and Coben 2006). Indeed, in terms of the social interaction between those on the stage and those in the audience, a better analogy than the theater might be a modern-day church that has a large congregation. In this social setting, the religious officiate is the general focal point within the room and guides the activities, but the congregation also contributes to the ceremonial program in a range of ways from "scripted" responses at predetermined, or predictable intervals, to socially acceptable spontaneous outbursts of religious rapture. Of special interest is that the plan of a modern-day church, especially one with a large congregation, is essentially the same as that of a theater as both environments are engineered to overcome problems associated with large-scale communication in the face of limited human sensory perception. Therefore, architectural features such as enclosed spaces, uninterrupted lines of sight, and differential elevations are employed. Furthermore, as with the ritual setting associated with the North Plaza PRPCs, the layout of a church also provides a space that symbolizes both a nominal sense of group unity and social dichotomy; the officiate on the elevated stage is the primary focus of the group and leads the ceremony. Yet he or she does so only with the "permission" of the group who are able to display their approval/disapproval of the officiate's performance via their own activities such as attendance and participation (Inomata and Coben 2006). Indeed, ritual spaces such as these are key points within which critical contestations of power (hierarchically and heterarchically organized) occurred on a regular basis (see Chapter 8; Inomata and Coben 2006; Moore 1996).

The PRPC is by no means the only Pre-Hispanic, North Coast example of space and architecture conforming to a theater-like configuration. At the Late Intermediate Period site of Chan Chan, many of the *ciudadelas* contained numerous examples of architectural complexes that were configured in a manner remarkably similar to those of the PRPC variant (see Donnan and Mackey 1974; Chapter 2 and Chapter 9). These "patio groups" contained an elevated platform in the south that was fronted by a large, open plaza in the north (Donnan and Mackey 1974; Moore 1996). There were separate doors that served both zones and allowed those on the platform and those in the plaza to enter and exit the complex without having to co-mingle (Donnan and Mackey 1974). The entry associated with the platform led into corridors and rooms that were not viewable to those in the plaza (Donnan and Mackey 1974; Moore 1996, 2005). A single, central ramp was used to negotiate the elevational difference between the plaza and the platform (Donnan and Mackey 1974; Moore 1996). As with Jatanca, the patio groups within Chan Chan were designed at least partially as a stage upon which ritual/ceremonial activity could take place within view of people gathered within the associated plaza (Moore 1996, 2005).

Based upon the analysis of architecture at the site of Pacatnamú, Chris Donnan (1986:80) argues that the primary function of the Huaca I Complex was to provide a space “for the staging of ceremonies.” In this scenario, the large North Courtyard (approximately 9,000 square meters) could have served as the “seating” area for people to witness ritual/ceremonial activity conducted on “stages” made up of Huaca I, the East Pyramid, or the two low platforms (Theater in the Round) in the center of the plaza (Donnan 1986). There are additional architectural enclosures that could have served as a theatrical backdrop for ritual/ceremonial activity such as the plaza on the summit of Huaca I, the summit of the East Pyramid, and the Central Courtyard of the West Complex (Donnan 1986). In addition to the Huaca I complex, Pacatnamú also had a series of enclosed patio groups within areas such as the Major Quadrangle that were similar in form – although much smaller in scale - to the PRPC (see below).

Conclusion

In addition to its role as a formal entrance and place of political activity (see Chapter 8), by viewing the PRPC as a staging complex such as that found in a theater or church, one is able to better understand how the overall architectural configuration aided in symbolic communication between those in the ramp/plaza room and those in the plaza (see Inomata and Coben 2006). While the direction of communication between the two groups can co-vary, in general, the architecture of theaters, churches, and the Primary PRPCs reflects “Spectacular Spaces” that were literally engineered to showcase symbolically and theatrically charged events that transcended mundane spaces of communication. By equating the function of the Primary and Secondary PRPCs and the PRPC Variant associated with The Acropolis with that of a theater, features such as the presence of separate entries and elevational differences can be better understood, since within this context, the spatial arrangement reflects the performative nature of ceremonial activities that occurred within the PRPC. By combining archaeological data and proxemics with the spatio-architectural form of the PRPC, this chapter will now examine the parameters of the ritual events that occurred within the Jatanca Compounds.

The Primary PRPC: Parameters of Performance

Based solely upon their layout, the north plazas and associated ramp/platform rooms would have provided a suitable space for large-scale ceremonial activity within Jatanca. The inclusion of archaeological data can provide some insight related to the parameters of ritual form and movement that were conducted within these large spaces. In addition, by combining architectural and archaeological data with proxemics theory and ethnographic information, an even greater understanding of ritual form within Jatanca can be achieved. Based upon these data, this section of Chapter 7 will demonstrate that many ritual performances within the Primary PRPC were designed in part for large crowds and probably relied heavily upon the use of elaborately staged spectacles as an effective means of symbolic communication.

The Archaeological Data from Jatanca

Despite the generally "clean" nature of the floors within the compounds (see Chapter 5), there is some direct evidence that demonstrates that the PRPCs were used for ceremonial purposes. Aerial excavations within the Primary PRPC (Swenson et al. 2008, 2009) have uncovered the presence of numerous reddish-brown burned spots indicating that small fires had been built upon the surface of both the ramp/platform room and the adjacent plaza. While no dates have been run from the ash associated with these features, it still seems likely that they date in use to the Late Formative Period as they are located directly on top of the use-floor, but beneath a deep layer of sand that currently covers the plazas. Therefore, if Jatanca was abandoned at least in part due to an influx of barchan dunes (Eling 1987; Hecker and Hecker 1990; Ubbelohde-Doering 1966; see also Chapter 3) and not significantly re-inhabited at a later date as indicated by architectural (Chapter 3, 6, and 9), ceramic (Chapter 4), and excavation data (Chapter 5), it seems most likely that the burned spots are associated with activities that occurred during the Late Formative Period occupation of the site. The significance of these burned spots in demonstrating ritual activity can be approached from multiple directions: on-site food preparation for feasting; lighting during nighttime ceremonial events; or as an integral part of the ceremonial activity.

It is possible that at least some of the burned spots within the plaza of the PRPC are the result of food or *chicha* preparation necessary for feasting activities associated with ritual. While much concern has been expressed as to the quality of surface material provenience (see Chapters 2 and 3), it should, nonetheless, be noted that most of the ceramic fragments found within the plazas are from vessels that would have been suitable for the distribution and consumption of chicha or food (Warner 2006 – see also Chapter 4). That feasting was often an important part of ceremonial activities within the Andes has been demonstrated ethnohistorically, ethnographically, archaeologically, and iconographically. Both ethnohistoric and ethnographic documents abound with examples of the confluence of feasting with ceremonial events (Abercrombie 1998; Bastien 1978; Meyerson 1990; Sallnow 1987). For example, Garcilaso (1609/1966) wrote extensively about the importance of feasting during ceremonial activity among the Inca. These feasts included the consumption of large amounts of meat that were cooked on-site (within a "square") as an integral part of the ceremony itself. During the Feast of the Dead, Bastien (1978) describes in detail the link between food, chicha (and cane alcohol), and ritual activities related to deceased ancestors. In his book, "Pathways of Memory and Power," Thomas Abercrombie (1998) provides a lengthy description of the activities that coincide with both the festival of the Virgin of Guadalupe and the festival of the Exaltation of the Cross in the highland Bolivia town of *Santa Bárbara de Culta*. Both festivals are marked by the mass transportation, preparation, and consumption of Andean staples such as llama and *chicha* within both large private patios and, ultimately, the *Plaza de Armas*.

What is somewhat curious is that no bones or other direct refuse associated with feasting have been recovered within the Primary PRPC – only the remains of small irregular hearths and broken ceramics. However, given the general cleanliness associated with compound floors (Chapter 5), this may not be all that surprising as it appears as though generally debris was quickly removed from use-surfaces.[13] In addition, it is possible that the small fires within the plaza have nothing to do with actual food preparation. At the site of Pampa Grande, excavations within Sector D uncovered a large accumulation of llama bones in association with unifacial and bifacial basalt flakes (Shimada 1994). The bones, predominantly long-bones, had been smashed mid-shaft in an apparent effort to remove marrow (Shimada 1994). Of greatest interest at this juncture is that the bones were not found in direct association with any hearths – despite the fact that some of them had been burned, indicating that pre-cooking preparation took place in one location, while cooking and consumption likely took place in another (Shimada 1994). It is possible that this pattern of multi-spatial/multi-stage preparation was also used at Jatanca as evidenced by the possible midden deposits associated with CI-U#3. In this scenario, functional aspects of feast preparation, such as the processing of meat, the production of *chicha,* cooking, or the temporary disposal of feast-related refuse may have occurred within room #64 (see Figure 6.2), leaving the plazas themselves – the actual loci of the feat – relatively clean.

In addition, the fires may have been used to illuminate ritual activities within the PRPC at nighttime. Given the steady velocity with which winds blow across the Pampa Mojucape (see Chapter 3) it seems likely that many of the ritual/ceremonial events conducted within the PRPC were held after sundown – a time during which the daily winds decreases greatly, to the point of disappearing altogether. Scheduling

[13] A possible exception to this may be Compound I/Unit #3 (see Chapter 5).

ritual/ceremonial events for post-sundown would also greatly increase the audio clarity of symbolic communication within the PRPC. However, the gain in the ease of audio transmission comes at the expense of the conveyance of visual information, hence the use of fire so as to illuminate activities within both the ramp/platform room, and the plaza.

It is also possible that the fires cannot be explained in a strictly functional sense, but are the remains of ceremonies where fire itself was a key element as was the case for many diverse cultures throughout prehistory (see Hodder 2006; Houston 2006; Inomata 2006). This is true for the Andes as well. North and Central Coast Highland sites associated with the Kotosh Religious Tradition such as Kotosh, Huaricoto, and La Galgada used centrally-located semi-subterranean hearths during ritual activity (Burger and Burger 1980, 1986; Burger 1995; Grieder and Mendoza 1988). At Huaricoto(2000BC to 200BC), that these hearths were a key part of ritual events is indicated by the consistent presence of "ceremonial offerings" such as burnt bone and quartz crystals (Burger and Burge 1980). While later examples of ritual architecture at Huaricoto would enclose the hearth within four walls and ventilate the fire with a subterranean duct, the earliest example of these ritual spaces were built "in the open" (Burger and Burger 1980:28). Whether enclosed within four walls, or built in the open, it is clear that fire formed a key element in ritual activity at Huaricoto, and for other Kotosh Period sites**.** The use of fire in ritual has also been noted at the North Coast site of San Luis, located within the Zaña Valley (Dillehay 2004). This site was occupied for some 300 hundred years (1400 and 1100BC) during the Late Initial Period (Dillehay 2004). In terms of monumental architecture, this site is made up of two adjacent U-shaped structures composed of elevated platforms and extending wings that form a central plaza (Dillehay 2004). On the surface of both the platform and the wings, Dillehay (2004) excavated more than 580 features that were composed of C-shaped "burned depressions" that contained plant material. Evidently, these features were made by first starting a fire within either a broken bottle rim or a neckless *olla* and then quickly overturning the contents onto the use-floor. According to Dillehay (2004:253), "These features appear to be products of individual ritual episodes offering burning plants and smoking pots to the mound and its ideational referents."

Archaeological Data and Ritual Parameters: Conclusion

The archaeological data related to ritual activity recovered directly from the Primary PRPCs is admittedly thin due in no small part to the cleanliness of the plazas and the ramp/platform rooms. Nonetheless, two conclusions can be drawn from the data:

1. Small fires were built in the plaza and may have played an undetermined role in ritual activity (i.e. food preparation, lighting, integral to ritual itself).
2. The presence of the fires and a large number of broken domestic vessels within the plaza may indicate that the consumption of food and/or chicha was part of ceremonial activity.

Indeed, one would like to have considerably more evidence in order to archaeologically substantiate that the use of fire and food/drink consumption took place within the plaza *concurrent* with ritual activity. Based upon the data at hand, however, that these activities took place during ceremony cannot be discounted. At this stage it would be of benefit to incorporate theory developed from proxemics (Hall 1959, 1966; Moore 1996) to examine the parameters of ritual activity within the Primary PRPC.

Proxemics and the Parameters of Ritual

The application of theory derived from proxemics (the cultural mediation of communication and its spatio-perceptual limits (see Hall 1959, 1966, 1976; Moore 1996a, 1996b; Rapoport 1982) can tell archaeologists much about the parameters of ritual activity that took place within the Primary PRPC and other ritual areas within Jatanca such as the Secondary PRPCs and the PDSP (See below). Within proxemics, theories generated specifically from the limits of sensory perception have perhaps the greatest utility to archaeologists studying ritual architecture. According to Moore (1992, 1996a, 1996b), the organization of ritual space and architecture is shaped in part by the physical limits associated with human perception as elaborated upon by Edwin T. Hall (1959, 1966). By focusing upon limitations of physiological perception associated primarily with eyesight, speech, and hearing, Hall (1959, 1966) identified multiple thresholds of human interpersonal communication. The key variable in Hall's formulation is the distance between the message sender and message receiver since the intervening distance imposes spatial limits upon the transmission of certain types of information, via specific media, beyond certain thresholds. In other words, if the goal is to communicate, beyond a certain point in space, the distance between sender and receiver prejudices the selection of some forms of information transmission over others. By combining the restraints imposed by human intercommunication with an increasing distance between sender and receiver, Hall was able to identify four sliding thresholds of communicative potential: Intimate, social, public close and public distant (Table 7.2).

Table 7.2 – Relationship between Distance and Perception (adapted from Moore 1996)

	Distance in Meters			
	0m Intimate	1m 2m 3m Social	4m 5m 6m Public Close	7m 8m 9m 10m Public Distant
Oral / Aural	Soft voice Whisper	Casual voice	Loud voice when talking to group	Full public-speaking voice; Frozen style
Details Vision	Details of skin, teeth, face visible	Fine lines of face fade; Wink visible	Eye color not discernable; Smile/scowl visible	Difficult to see eyes and subtle expressions
Scan Vision	Whole face visible	Upper body visible; Cannot count fingers	Upper body and gestures	Whole body has space around it in visual field
Per. Vision	Head and shoulders	Whole body movement	Whole body visible	Multiple people become important in vision

The above table demonstrates the relationship between increasing distance and the decreasing ability to transmit information in two broad perceptual categories:

oral/aural and visual. Visual information transmission is subsequently broken down into three sub-groups: detailed visual, scanning visual, and personal visual. In addition to being measured in quantifiable distances, Hall has created categories of social distance as well: intimate, social, public close, and public distant. Therefore, in the case of oral/aural, as distance increases, the ability to transmit detailed information goes down. In an "intimate" setting (<1m), information (of a symbolic or non-symbolic nature) can be effectively transmitted using subtle cues such as tone of voice, facial expressions, body posture, and subtle gestures. Conversely, when the transmission distance increases to "public distant" (>8m) subtleties such as those above are no longer affective and must be discarded in favor of a full speaking voice and using broad, "theatrical" gesticulations. As the distance continues to increase, alternative forms of communication such as music, shouts, group chanting, and iconographic displays must be employed if symbolic communication is to occur between parties – irrespective of the number of people involved as either transmitters or receivers.

There are a few caveats to consider with regards to Hall's chart. As Hall admits, while social measures of distance such as "intimate" and "social" vary from individual-to-individual and culture-to-culture, as a rule of thumb they are generally valid (1959, 1966, and 1976). In addition, the above thresholds are not rigid and vary greatly between individuals as, for example, younger people tend to have better vision and hearing than do the aged (Tuan 1977). However, it should be obvious that as the distance between message sender and message receiver increases, the amount of detailed information that can be effectively transmitted decreases due to limitations in human physiology. Due to these limiting factors, certain messages, at certain distances, under certain conditions will demand particular forms of transmission in order to effectively convey information, in this case is the transmission of symbolically-charged content.

As table 7.3 shows, the plazas that make up the Primary PRPCs are relatively large with the north wall located as far as 75 meters from the northern edge of the ramp/platform room (or the front edge of the stage). When this depth is combined with the range of total plaza area (between $1140m^2$ and $2250m^{2)}$, these spaces fall within Hall's public/distant category of communication. Of special interest is Compound II, which at $1140m^2$ has by far the smallest Primary PRPC plaza area. The relatively small dimensions, however, are due more to its narrow width than to its depth, which is 57m deep – almost the same measurement as the Primary PRPC plaza within the Acropolis, and only 17m meters shorter in depth than the Primary PRPC plaza within Compound I. Therefore, those conducting rituals within Compound II's Primary PRPC were faced with the same distance-based, human perception limitations as those within the other large plazas, likely necessitating the utilization of a similar, if not identical combination of distance-related communication formats augmented by the same set of architectural features.

Table 7.3 – Dimensions of Primary PRPC Plaza

	Acropolis	**Compound I**	**Compound II**	**Compound III**	**Compound IV**
Plaza (WxL)	**36m x 58m**	**32m x 70m**	**20m x 57m**	**29m x 72m**	**30m x 75m**
Total Area	**$2088m^2$**	**$2240m^2$**	**$1140m^2$**	**$2088m^2$**	**$2250m^2$**

In addition to the depth/area of the Primary PRPC, open, outdoor theaters present special challenges for those staging rituals. According to Knudsen and Harris (1978), there is a general physiological limit to the amount of space that an actor's voice is audible to an audience within an outdoor setting without the aid of electronic amplification. Assuming that the theater is sheltered from the wind, actors can typically be heard within in area approximately 85 feet wide X 75 feet deep (approximately 26m x 23m = $598m^2$) by an audience of about 600 – an area much smaller than that occupied by any of the Primary Plazas (Knudsen and Harris 1978).

Even within an otherwise empty plaza (see below), a person located along the north wall of the primary plaza would not be able to interpret subtle communication signals such as vocal tones, subtle gestures, body posture, and facial expressions transmitted from the ramp/platform room during ceremony (Hall 1959; see also Moore 1996). If one adds in the likelihood that during ceremony the plazas were full of people (see below) who were both observing events within the ramp/platform room and actively participating, then it seems likely that the architectural configuration of the Primary PRPC might be at least partially the result of the need to bolster the ability to effectively transfer messages containing highly charged symbolic content between parties over long distances in the face of natural human limitations. There are numerous physical aspects of the PRPC that reflect this need.

All of the Primary PRPCs have open lines of sight between the back of the plaza and the ramp/platform room. The ramp/platform room is elevated above the surface of the plaza and rises slightly in elevation toward the south, increasing the visibility of activities within this area. Entry into the ramp/platform room is always through a baffled door effectively negating any distractions that might otherwise occur due to preparatory activities occurring behind those within the staging area. The back wall of the staging area is especially high (at least 2+ meters) and thick (2+ meters at the base) – far thicker than a "typical" interior compound wall, which permits better sound amplification into the adjacent plaza (Moore 2005, 2006). The entire area is enclosed by a large wall that defines the space, focuses attention on the ramp/platform room, and reduces external distractions from activities occurring outside of the confines of the PRPC (see Ching 1979). Finally, in the case of Compounds 2 and 3, the plaza has a slight trapezoidal shape that aided in the direction and refraction of sound during performance, and mimicked the natural shape that a crowd assumes when gathering near a single focal point.

In addition to spatio-architectural organization of the interior, rituals could have been staged so as to maximize the transmission of symbolically charged messages within the large Primary Plazas. Indeed, highly-charged symbolic communication could have been "amplified" in a number of ways. Group chants, highly-scripted (almost predictable) ritual activity, movement between locations, music, percussion instruments, elaborate costumes, dancing, iconic gestures and/or props could have all been employed as a means of augmenting ritual communication across the distance that separated those in the ramp/platform room with those in the back of the plaza (Inomata and Coben 2006; Moore 2006; see below).

Distance and Sensory Perception: Discussion

The application of proxemic theory to spatio-architectural data gathered from the Primary PRPC results in some interesting patterns, parameters, and hypotheses.

1. The Primary PRPCs are relatively large and would necessitate the use of "Public Distant" communication techniques during moments of symbolic transfer associated with ritual and/or politics, especially if the plaza was full to the point that people were located along the interior perimeter.
2. The Primary PRPC is purposefully engineered in a multitude of ways to help negate the inverse relationship that exists between increasing distance and detailed symbolic transfer.
3. The use of staging techniques such as chants, music, elaborate costumes, etc… would have aided greatly in staging ceremonial performances.

In addition to elucidating the above points, proxemic-based analysis of architecture can provide insight into two other aspects of ritual activity within the Primary PRPC: 1) Plaza population figures; and 2) population distribution within the PRPC.

Plaza Population Figures and the Distribution of Population Density

Since it also served as a formal entry, the Primary PRPCs was used for purposes other than those related to ritual activity. For the most part, however, the Primary PRPC appears to have been designed with a strong consideration for staging requirements during large-scale ritual that perhaps incorporated hundreds of people. One of these requirements must have been the establishment of some kind of relationship between the size of the plaza, and the number and distribution of people who would occupy it during ceremonial events. While exact answers to these design/use issues are not possible, some likely parameters can be established from which inferences can be drawn, if for no other purpose than that of comparison, both internally and between sites.

The below table (Table 7.4; see also Moore 2005) provides a range of estimated plaza occupancies from three different sources. The figure of 21.6 m2 per person was derived from estimates based upon plaza use by the Yanomamö (Burger 1987). An alternate plaza-population standard has been created by Conklin (1990) which based upon measurements made in a closely-packed crowd resulted in a standard of .46m2 per person. Finally, an additional alternate plaza-population standard of 3.6m2 per person has been derived from the Inca site of Ollantaytambo (Cook 1981).

Table 7.4 – Estimated Plaza Occupancy

	Acropolis	Compound I	Compound II	Compound III	Compound IV
Plaza Area	$2088m^2$	$2240m^2$	$1140m^2$	$2088m^2$	$2250m^2$
1 per $21.6m^2$	96	127	54	99	100
1 per $3.6m^2$	560	762	324	591	597
1 per $.46m^2$	4380	5965	2539	4630	4674

The validity of applying any of the above standards to Jatanca as a means of plaza population estimation is certainly questionable for a number of reasons. The standards derived from Yanomamö and Inca data are far removed from the time and space of Jatanca. In addition, the number of people that participated in any given ritual could fluctuate based upon numerous factors such as the type of ritual, the time of year, the total population of the site, etc…. Therefore, the plaza population numbers are intended to represent an *approximation* of a potential plaza population. These shortcomings in analogy are readily apparent in Table 7.4 as the range of population varies greatly depending upon the variable used in their calculation. Intuitively, the figure derived from the Yanomamö data seem far too low, while the figure derived from Ollantaytambo appear to be far too high – especially in light of the amount of domestic debris that surrounds the architectural core of Jatanca (Chapter 3 and 4). Using the variable 1 person per 3.6 m^2, however, results in a much more "reasonable" plaza population estimate for all five PRPCs of several hundred people (range = 324 to 762). Whether this figure is reflexive of reality or not, there is no doubt that all of the Primary PRPCs have adequate space for hundreds of people to have participated in activities associated with ritual such as dancing, feasting (*chicha* and/or food), or watching staged ceremonial activities within the ramp/plaza room.

While it is highly speculative, it is of interest to consider how the people were possibly distributed throughout the Primary PRPC during ritual events. While all of the above variables are derived from equally spaced averages, clearly people did not distribute themselves in such a manner within any given plaza, at any given time (see Inomata and Coben 2006). Obviously, given the large, open configuration of the plaza, the use of space was flexible and population densities could have been quickly redistributed or reconfigured as needed to accommodate additional ritual activities such as staged ceremony within the ramp/platform room, feasting, musical interludes, and dancing (see below). If the ramp/plaza room was the periodic focal point of staged ceremonial activities, then one might expect that during that time people arranged themselves in declining density from the edge of the ramp/platform room toward the northern wall of the plaza – similar in form to that of a crowd gathered for an outdoor concert that lacks fixed seating. During feasting, population density may have been dispersed relatively evenly across the plaza, or clustered in node-like fashion around points where libations were distributed. During episodes of dancing within the primary plaza, the population density may have varied greatly – especially if a significant portion of the attendees were not dancing simultaneously, but spent at least part of their time as spectators. Finally, the presence or absence of musicians could have also impacted the disbursement of population densities within the primary plaza during ritual (see below; Moore 2006).

The open, uninterrupted expanse of the primary plaza at least partially reflects its highly flexible, multi-purpose function. From a purely physical point of view, the time needed to transition between activities such as area for an audience, space for feasting, or dance floor would have likely been minimal even for hundreds of people. The ramp/platform room, however, is filled with highly specialized features (paired ramp/platform features) that take up a considerable portion of the total space, greatly reducing its expedient flexibility of function and reducing the number of people that could occupy the area. In addition, these features are not widely distributed throughout the site, generally only occurring within a very narrow range of restricted access locations (see Chapter 6). It seems likely that this area was designed and used for more specific activities related to ritual and political (see Chapter 8) spheres of life – one of which was to provide a stage from which elaborate ceremonial displays could be projected into the plaza. Therefore, activities conducted within this room may not have been a mirror-image of activities that were occurring simultaneously within the adjacent plaza, resulting in different population distributions. Ultimately, the ramp/platform room was probably occupied by far fewer people at a far lower density than was the primary plaza during ceremonial activities (see Chapter 8).

It is also possible that ritual activities had some moments of processional movement, based upon the architectural configuration of the room (see Moore 1996, 2005, 2006). The presence of a strong central axis that leads from the exterior door within the center of the north plaza, through the ramp that connects the plaza and the ramp/platform room, between the ramp/platform features, and terminates within the baffled entry in the center of the south wall might indicate the presence of a path that was at least on occasion used in symbolic communication. In fact, the periodic inclusion of axial movements such as these into ritual activities might aid greatly as it would allow those located in the plaza to come into more intimate contact with officiates and allow for the transmission of ritual information via more subtle cues (Hall 1959, 1966; Moore 1996).

Plaza Population Figures and the Distribution of Population Density: Discussion

While portions of the above section are speculative, it can nonetheless inform archaeologists on a number of spatio-architectural/behavioral matters that can be cross-examined with other data sets such as ethnohistory, ethnography, and especially North Coast iconography (see below). Some definitive statements can be made at this point, however:

1) Based upon the variable of 1 person per $3.6m^2$, hundreds of people could have easily fit within the Primary PRPC, although the number could have been significantly higher or lower depending upon numerous factors.
2) The open, unobstructed layout of the primary plaza would have allowed for the rapid reconfiguration of occupants as dictated by the type of ritual activity taking place.
3) The presence of highly specific architectural features in the ramp/platform room indicates that this area had a much narrower range of functions, one of which was to serve as a setting for the presentation of highly staged performances for large audiences.
4) Population density between the two major sectors of the Primary PRPC was probably dissimilar with a generally much lower density located in the ramp/platform room than the plaza.

The Primary PRPCs were extraordinarily important points within which the various social segments that comprised the constituency of Jatanca could come together for ritual activity. They were not, however, the only examples of ritual architecture within the site. The Secondary PRPCs, The PRPC Variants, and the PDSP (Plaza/Dais/Stair/Platform Complex) represent additional examples of spectacular spaces that were devoted to ritual activity. It is to these more intimate, but no less important examples of ritual architecture that this chapter now turns.

Variable Spaces, Variable Modes of Communication

In addition to the Primary PRPC, there are smaller architectural complexes within all of the major compounds that were likely used for ritual activity. This nested form of ritual complexes can be organized in many ways. At the Initial Period site of Garagay, located in the Rimac Valley, multiple ritual complexes of varying size and elevation were organized along a strong central axis and may imply the presence of processional-based rituals (Moore 1996; see also Quilter 2001). The same pattern of axially-oriented ritual complexes that vary in elevation is found at the mid-Jequetepeque Valley site of Monte Grande (Tellenbach 1986). On the summit of the main huaca, there are numerous smaller rooms that could have also been used for intimate ritual activities (Tellenbach 1986). Huaca de los Reyes, located in the Moche Valley, is organized in a similar manner: A series of three increasingly smaller, axially organized courts front an elaborate huaca, the summit of which contains a number of small rooms (Pozorski 1980, 1982, 1985). While the form is somewhat different, the nested pattern of ritual complexes can be found at the Chimú site of Chan Chan within the better-preserved *Ciudadelas* such as Tello, Laberinto, Velarde, Bandelier, Rivero, and Tschudi (see maps from Moseley and Mackey 1974). These six compounds are all entered through, or on close proximity to a large plaza that has a ramp/platform feature located along the south wall and is in many respects analogous to the PRPC Variant at Jatanca. Beyond this first complex is a second complex that is identical in form, but somewhat smaller in size. As Moore (1996) points out this pattern is to be expected as the presence of Hall's (1959) public distant level of communication occurs only where there is also evidence that public near communication took place as well.

In turning the focus specifically to Jatanca, it is of interest to note that Compounds III and probably Compound IV are similar to the ciudadelas of Chan Chan as smaller replicas of the Primary PRPC are located further within the interior of the compound (See Chapter 6). In other words, one must first pass through the Primary PRPC before entering the identical Secondary PRPC. Compound III has an especially pronounced pattern of nested access as the PDSP can be entered only after first passing through both the Primary and Secondary PRPCs. Despite the lack of Secondary PRPCs within Compounds I and II, both structures also have smaller complexes located behind the Primary PRPC that were likely used at least occasionally for ritual purposes as evidenced by the presence of ramp/platform (Compound I) and ramp/stair (Compound II) features.

In examining the size of these rooms as related to Hall's table of sensory thresholds (Table 7.2), it is obvious that a wide range of modes of communication would have been necessary to effectively transfer messages containing symbolic content within these environments (Table 7.5). The Secondary PRPC in Compound IV (C/IV-PRPC2) is almost as large as the Primary PRPC within Compound II placing it within Hall's Public Distant category and necessitating the use of less verbal, more iconic forms of communication during ritual activities. The PDPS in Compound III (C/III-PDSP), however, falls between Public Close and Public Distant which would allow for the utilization of more verbal-based forms of communication during moments of symbolic transfer. The same can be argued for the ramp/stair room in Compound II (C2-R#) where facial expressions and voice modulation could have also been effectively used in symbolic communication. Despite falling just within the Public Distant category of communication, the PRPC Variant (C/I-PRPC Var.) in Compound I would have still provided a much more intimate environment for ritual activity than do the Primary or Secondary PRPCs. During the 2007 field season, postholes were located that indicate the former presence of a roof that spanned the ramp/platform and opened out into the plaza (see Swenson et al. 2008). A roof such as this would have served several functions such as reducing wind noise/disruptions, minimizing distractions due to activity behind the platform, aid in voice projection, and generally increase the intimacy and visual focus of the location (see Allen 1995; Panero and Zelnik 1979).

The PDSP in Compound III is unique among the ritual architecture of Jatanca due to the presence of two low, rectilinear pedestals within the center of the small plaza. The presence of these features indicates that the form of ritual within these complexes was different from those associated with plazas that lacked such obstructions. While the role of the pedestals remains unknown, it seems reasonable to assume that the plaza was used for a more specific purpose than were the plazas associated with the open, obstruction-free PRPCs.

Table 7.5 – Dimensions for Alternate Ritual Areas Plazas (Compound I, II, III, and IV)

	C/I-PRPC Var.	C/2–S/R Room	C/III-PRPC2	C/III-PDSP	C/IV-PRPC2
Dimensions	**16mx10m**	**11mx8m**	**26mx14m**	**7mx7m**	**19mx52m**
Area (m^2)	**160m^2**	**88m^2**	**364m^2**	**49m^2**	**988m^2**
Pop (3.6 m^2)	**44 People**	**24 People**	**101 People**	**14 People**	**274 People**

While no direct evidence exists, it is possible that the Acropolis may have been used for smaller-scale ritual encounters within the elevated southern sector due to the presence of a low wall that physically (but not visually) separates the elevated ramp/platform room from the north plaza and defines the edge of the raised field, all while maintaining spatial continuity (Ching 1979). The height and width of this wall provides a comfortable place to sit and simultaneously makes it difficult to step over the wall in order to access the PRPC Variant features. As a result, one is "encouraged" to use the entrance within the northwest corner of the room. This architectural modification gives the area a more enclosed and intimate feeling. Therefore, it is possible that this ramp/platform room may have been designed with the flexibility to host rituals of both a large-scale and small-scale nature; large-scale rituals were conducted with participants in both the plaza and the ramp/platform room, while smaller affairs were conducted solely within the ramp/platform room within the area partially defined by the low, north dividing wall.

While largely excluded from this chapter due to its poor condition, it should be noted that based upon the presence of ramp/platform features in a variety of configurations and orientations, Compound V has numerous enclosed locations that could have been used to host ritual activities of an intimate nature (Table 7.6). While information on this compound is incomplete (see Chapter 3 and Chapter 6), a PDSP complex that has a single rectilinear pedestal within the center of the plaza was discovered and mapped in 2005 (Warner 2006) and excavated in 2008 (Swenson et al. 2009). As with the PDSP Complex in Compound III, the presence of the low pedestal likely indicates that this complex had a fairly specific purpose, possibly related to ritual activity. For the most part, the rooms within Compound V fall somewhere in-between Hall's (1959, 1966) communication categories of public-close to public-distant.

Table 7.6 – Dimensions for Alternate Ritual Areas (Compound V)

	Sec. B/R 5	Sec. C/R 3a	Sec. C/R 3b	Sec C/R 4	Sec C/R 5
Dimension	**7m X 5m**	**9m X 7m**	**8m X 3m***	**20m X 12m***	**8m X 7m**
Sq. Area	**35m2**	**63m2**	**26m2**	**240m2**	**56m2**
Per. 3.6m2	**10 People**	**18 People**	**7 People**	**67 People**	**15 People**

***Approximate dimensions**

Variable Spaces, Variable Modes of Communication: Conclusion

Besides the Primary PRPCs, additional areas of ritual activity can be identified within the Jatanca compounds. These areas tend to be much smaller in size and vary in their form. For example, some examples (the Secondary PRPC) are copies of the Primary PRPC, while others (the PRPC Variant and the PDSP) are configured differently, but incorporate all of the elements associated with the Primary PRPC such as enclosed plazas, separate entries, platforms, and ramps. The political significance of these ritual places is discussed at length in Chapter 8. However, to sum the finding s within this section:

1) As with other Andean sites, within Jatanca Public-Distant ritual architecture is found in association with Public Close ritual architecture (see also Moore 1996).
2) As with other Andean sites, Public Distant architecture is more easily accessed than is the Public-Near architecture (see also Chapter 6).

3) Due to the presence of low rectilinear pedestals within the center of their plaza, the PDSPs may have been the location of more specialized rituals than were the open plazas associated with the Primary and Secondary PRPCs.
4) According to parameters outlined by Hall (1966, 1972) the PRPC Variant in Compound I, the stair/ramp room in Compound II, the PDSP Complexes in Compound III and V, and the ramp/stair rooms within Compound V were likely locus of intimate, detailed ceremonial activities that could rely upon communicative devices such as the spoken voice as a means of symbolic conveyance.
5) It is possible that the PRPC Variant in the Acropolis could be used for both intimate and large-scale symbolic communication.

Activities within Ritual Spaces: Iconography, Ethnohistory, and Ethnography

Based upon their relative size, location in the room sequence, controlled access, incorporation within all of Jatanca's major compounds, and the presence of ramp/platform features, the PRPCs and PDSP Complexes were important loci of ritual/ceremonial activity within the site of Jatanca. By no means, however, do I argue that they were the only areas used for ritual activity within the site. Archaeological (Burger 1995; Donnan 1986; Keatinge 1978; Moore 1996, 2005; Silverman 1993; Uhle 1903/1991), ethnohistoric (Cobo 1990; Huarochiri Manuscript 16c), and ethnographic (Abercrombie 1998; Bastien 1978; Meyerson 1990; Sallnow 1987) data indicate that the pilgrimage has been an important ritual activity within the Andes for perhaps thousands of years. In addition, less visible rituals conducted at lower levels of social organization such as the household level, probably also took place within the environs of Jatanca, but have left little in the way of physical evidence. Nonetheless, based upon data collected during the 2004-2005, 2007, 2008, and 2009 field seasons, the most visible example of ritual/ceremonial activity uncovered to date within Jatanca is that of the universal presence of ritual architecture within all of the major compounds.

As discussed above, due to poor preservation, taphonomic issues, and likely cleaning events, there is little in the way of direct evidence as to the types of rituals that were conducted within the Primary PRPC. The use of proxemics is a tremendous aid in examining some issues, but leaves much to be desired in term of specific ritual and/or political detail. Therefore the use of iconographic representations drawn from other Andean groups can be critically, but fruitfully employed as an aid in examining the veracity of hypotheses generated from proxemics, and as a means of expanding upon the general form of ritual/ceremonial activities conducted within this important area.

Iconography and Ritual

Unfortunately, Formative Period North Coast groups left little in the way of directly accessible depictions of their ritual/ceremonial life (see also Bennett 1950; Brennan 1980; S. Pozorski and T. Pozorski 1987; T. Pozorski 1980, 1982). This was not the case with other later groups such as the Moche, Lambayeque, and the Chimú, all of whom depicted ritual/ceremonial events both directly and indirectly via diverse media such as wood, ceramic, metal, shell and textiles (Bawden 1996; Cordy-Collins 1990; McClelland 1990; Shimada 1994; Topic 1990). In addition, high-ranking individuals from Moche sites such as San José de Moro (Castillo 2001) and Sipán (Alva 2001; Alva and Donnan 1993) were buried while wearing elaborate garments suitable for theatrically-oriented activities (Quilter 2001). In addition, individuals wearing these same regalia were also depicted in Moche iconography and involved in what seems to be ritual activity (Alva and Donnan 1993; Donnan 1978; Donnan and Castillo 1994). While I am not arguing that the residents of Jatanca carried out identical rituals, by combining these later depictions (beginning with the most recent to earliest) with proxemics and the architectural data from the Primary PRPC, archaeologists can gain some insight into the ritual/ceremonial activities that perhaps took place within the Primary PRPC.

Huaca de la Luna: Chimú Wooden Models

At the site of Huaca de la Luna an extraordinary set of intrusive Chimú artifacts made primarily of wood, textile, and inlaid shell have recently come to light (Uceda 1999). These artifacts are a miniature model, or *maqueta* that depicts the funerary rites of a male and two female mummies, complete with attendants, being held within what appears to be an enclosed patio[14] (Uceda 1999). Of special interest is the fact that the miniatures figures had been sewn into place. As a result, it can be assumed that the real-life analogues of the miniatures must also have been in the same relative position for at least a portion of the ritual/ceremony. For example, there are three drummers located in three different corners of the compound. Moore (2006) argues that their location, the size of their drum, and the long drumsticks they are holding, would have resulted in a long, low reverberation that could be felt throughout the courtyard. Two of the drummers are flanked by figures that are blowing side-horns, while another figure, located near the patio's entry, has been identified as a possible "conductor" by Uceda (1999). In addition to the musicians, chicha pourers and spectators that line the adjacent walls can also be readily identified within the interior of the miniature plaza. Moore (2005) has argued that this *maqueta* represents the funerary rites of important individuals soon after their death, while Uceda (1999) believes that the *maqueta* depicts funerary rites that may have occurred decades after the death of the individuals as part of a recurrent series of ritual ceremonial activities, similar to those associated with the Inca (see Bauer 1992; Isbell 1997; Moore 2005). Whatever the timing, it seems clear that the *maqueta* represents ceremonial activities associated with mortuary rites.

The fixed spatial distribution of the figurines within the *maqueta* (Uceda 1999; see also Moore 2005) is also of interest and may help define the partitioning of social space within the Primary PRPC (see Chapter 8). First of all, the figurines are segregated into two groups: mummy bundles of arguably high-status individuals (located either on, or behind the elevated portion of the *maqueta*) and revelers (located exclusively in the adjacent plaza). Eight of the plaza-located figurines are located on opposing lateral

[14] Jerry Moore (2005) argues that the maqueta represents activities that occurred within "a patio inside a Chimú royal compound."

benches – four per side – and face into the plaza. All of the objects associated with the ritual (drums, Chicha, etc.…) are confined to the plaza, as are most of the human figurines (plaza - n=26/elevated area - n=3), making this area of the *maqueta* relatively crowded by comparison.

What is especially interesting (also see Chapter 9) are a number of architectural features shared between the *maqueta* and the PRPCs – especially the PRPC Variant as there are no additional ramp/platform features associated with the elevated room. For example, both are enclosed patios and have an elevated platform that appears to have been the focus of the enclosure. The elevational difference between the plaza and the platform is serviced via a single on-axis ramp. The patio and the elevated platform are both served by separate entrances that allow those on the platform and those in the patio to come together without having to directly encounter the other before, during, or after the ritual event. Behind the door that services the elevated platform is an enclosed area that cannot be seen by those in the plaza. Despite the fact that the *maqueta* is a representation of Chimú ceremonies, given the degree to which it also resembles the PRPCS - especially the PRPC Variant - it seems possible that the ceremonial events and socio-spatial organization depicted within the *maqueta* could also have taken place within Jatanca.

Pacatnamú: Textiles

Additional information as to ritual/ceremonial activities has been recovered from the Major Quadrangle within the nearby site of Pacatnamú (Donnan 1986). This partial textile recovered from Room Complex A, depicts two figures wearing elaborate clothing and headdresses. The figures are seated upon what Donnan (1986) has interpreted as “raised platforms.” Both individuals hold a large cup in an upraised hand and may be in the process of “proposing a toast” (Donnan 1986). Surrounding these two central figures are numerous attendants. The foreground of the textile may depict a plaza (or patio) area that is filled with dancers, individuals engaged in llama sacrifice, weavers, and unidentified individuals.

What is of special interest is the degree to which the architecture and ritual/ceremonial activities depicted on the textile conform to the architecture of, and artifacts recovered from the Major Quadrangle. Donnan (1986) equates the elevated architecture depicted in the textile with that of the elevated architecture located near the north entry of the large, rectilinear compound (Room Complex E). The summit of these platforms is approximately three-meters in height and can only be accessed via narrow ramps. Many of the floors within the patios and plazas that comprise the interior of the Major Quadrangle were surfaced with flat, clean, clay floors that would have been suitable for dancing (Donnan 1986). Finally, two sacrificed llamas and abundant examples of weaving were also found within the compound,[15] further supporting the hypothesis that the activities depicted on the textile fragment represent activities that had occurred within the Major Quadrangle (Donnan 1986). According to Donnan (1986:114):

> "The correlation between what is shown on the textile, what was excavated archaeologically, and the information contained in historical documents suggests that the *staging of these ceremonial activities was a primary function of the quadrangle* (emphasis mine). Thus we can postulate that various individuals went inside the quadrangle to perform ritual activities which included ceremonial drinking, dancing, llama sacrifice, and weaving."

As with the *maqueta* discussed above, simple comparison shows that there are numerous architectural similarities shared between the Major Quadrangle and the Jatanca compounds. Both are entered via a single doorway located within the approximate center of the north wall, making internal access generally restricted. The interiors of both structures are made up of rooms that vary in size and proportion and are linked both directly and indirectly by series of lengthy hallways. Most importantly, within the Major Quadrangle there are several examples of large patios that contain elevated focal points such as platforms accessed via narrow ramps, and *audiencias*, that

[15] One of the llamas was found within the elevated architecture near the north entry.

could have been suitable for staging ritual/ceremonial activity. That complex A and Complex E were likely used to stage rituals is further supported by the presence of separate entrances that service both the patio area and the focal point (elevated platform, *audiencia*, etc…). Finally, behind both the elevated platform and the *audiencia* are a series of rooms that are not visually accessible to those within the adjoining patio, creating a kind of "backstage" area that could be used for the storage of ritual items, and/or a place for ritual/ceremonial actors to await their cue to enter the complex.

The above complexes at Pacatnamú are architecturally and spatially reminiscent of the PRPCs associated with Jatanca and the setting depicted in the *maqueta*. If these complexes are specifically designed to host ritual/ceremonial activity of a performative nature as is depicted on the textile fragment, then it seems plausible that the PRPCs were used in a like manner and that at least some of the activities recorded both archaeologically and iconographically within the Main Quadrangle such as dancing, ritual sacrifice, and ceremonial drinking may have also occurred within the Primary PRPC.

The Moche: Sacrifice Ceremony

The "Sacrifice Ceremony," an iconographic representation associated with the Moche may also provide some insight into the rituals that took place within Jatanca, and help substantiate the "theatrical" nature of Primary PRPC activities. This elaborate ritual depiction, often found on ceramic finewares, shows the ritual sacrifice of presumed captives taken in warfare (Donnan 1978; Bawden 1996). The sacrifice occurs within a pyramid precinct at the hands of an array of elaborately dressed individuals, one of whom is presented a goblet filled with the blood of the victim (Alva and Donnan 1993; Bawden 1978; Donnan 1978). While it was originally argued that the iconography was a representation of mythical events, excavations at the sites of Sipán (Alva and Donnan 1993) and San José de Moro (Donnan and Castillo 1994) have subsequently uncovered individuals who were buried while wearing the distinctive, elaborate clothes depicted in the Sacrifice Ceremony such as feathered headdresses, and pectorals and back-flaps made from precious metals. According to Bawden (1996:115):

> "We now know that the themes identified … illustrate actual events rather than being solely supernatural representations, and introduce us to the actual persons who participated in them."

There is no doubt that despite the lack of chronological overlap, the Moche, while somewhat comparable ethnically, were very different from those who populated Jatanca (Bawden 1996; Moseley 1992; Quilter 2001). However, one could envision how elaborate rituals such as those conducted by the Moche within their pyramidal precincts could have been also effectively used by those at Jatanca within the large Primary PRPCs and the much smaller PDSP Complexes. As depicted in Sacrifice Ceremony iconography, spectacular, readily identifiable costumes that could be recognized at a distance; highly staged, predictable, if not rehearsed movements; and the use of a well-known ritual narrative would aid greatly in effective symbolic transfer during ritual, and might make events that were happening at a distance seem more intimate to the observer.

Unfortunately, there is not much archaeological data to provide detailed information as to the form, types, or staging of ritual activities within the PRPCs. The above three iconographic examples from other North Coast groups and made of differing media may be of some help as the events they depict took place within architectural complexes that are similar to the PRPCs. All of them depict elaborately dressed, likely privileged individuals associated with elevated areas that served as a focal point within their respective architectural complex. The *maqueta* and the tapestry show additional individuals of evidently lesser status drinking and dancing within a plaza. Other depicted activities include, drumming, sacrifice, and weaving. The Moche Sacrifice Ceremony may provide clues as to the narrative nature and elaborate staging of ceremonial events witnessed by those in the associated plazas.

Conclusion: Compound Function and the PRPC

Data compiled from mapping, surface collection and excavation have failed to yield much in the way of evidence that indicates that Jatanca's compounds functioned as significant points of storage, economic production, or mortuary activity. However, that the compounds were used for ritual activity at varying scales of intimacy seems readily apparent. The largest of the ritual areas, the Primary PRPC was designed in a manner similar to that of a modern stage/auditorium complex and served as a spectacular space within which elaborate ceremonial activity could be staged for the purpose of symbolic transfer associated with rituals such as those associated with mortuary rites, as perhaps indicated by the *maqueta* from Sol/Luna. Whatever the type of ritual, the Primary PRPC could have easily accommodated hundreds of people necessitating the use of "Public Distant" communication techniques in order to convey symbolically charged information between parties - especially if people were located along the plaza's perimeter, or densely packed within the plaza. The use of coordinated chants, music, elaborate costumes (as noted for the Moche Sacrifice Ceremony), etc… within ceremonial performance would have aided greatly in symbolic transfer among a large assembled group.

The open, unobstructed layout of the primary plaza would have allowed for the rapid reconfiguration of population densities as dictated by the type of ritual activity taking place. Population density between the two major sectors of the Primary PRPC was probably dissimilar with a generally much low density located in the ramp/platform room than the plaza. The presence of highly specific architectural features in the ramp/platform room indicates that this area had a much narrower range of functions, one of which was to serve as a primary focal point for the presentation of highly staged ritual performances for large audiences.

As with other Andean sites such as Chan Chan, Kuntur Wasi, Huaca de los Reyes, Aspero, and Monte Grande, at Jatanca, public close ritual architecture is found in association with Public-Distant ritual architecture, with the latter complexes being far more easily accessed. An excellent example of this form of architecture within Jatanca is the PDSP Complex in Compound III. According to parameters outlined by Hall (1959, 1966, 1972) the latter the PDSP Complex would have been architecturally suitable for intimate, detailed ceremonial activities that relied upon communicative devices such as the spoken voice as a means of symbolic conveyance, the implication being that rituals within these more intimate areas were staged differently than those within the PRPC Complexes. Finally, when compared to the Primary and Secondary PRPCs, due to the presence of low rectilinear pedestals within the center of their plaza, the PDSPs may have been the location of more specialized rituals than were the open plazas associated with the PRPCs.

Incorporating iconographic representations of ritual events from other North Coast groups into this chapter substantiates ideas generated initially from archaeological and proxemic data. These depictions may add some much-needed details related to the bodily position of individuals, specific ceremonial activities, and the distribution of participants within the complex. Iconographic activities recorded in a number of media clearly depict people of varying statuses engaged in a number of activities that have traditionally been associated with ritual such as dance, music, and chicha consumption. While none of these iconographic sources are from Jatanca, or associated with the Late Formative Period, given the similarity in architectural configuration, it seems reasonable to assume that these same activities may have occurred within the PRPCs and PDSPs as well.

While the PRPCs and PDSPs were highly suitable locations for variable scale ritual activity as reflected in their design, by no means, however, were these the only activities that occurred within these spaces. The PRPCs and PDSPs were also the loci of political activities such as reification, organization, and contestation. Indeed, it is a consistent pattern among Pre-European contact New World cultures that politics and ritual intertwine and that political authority is likely dependent upon control over ritual (Burger 1992; Conrad and Demarest 1984; Conrad 1992; Demarest 1992; Inomata and Coben 2006; Moore 1996). It is to the sociopolitical organization of Jatanca that this study now turns.

Chapter Eight: Architecture and Sociopolitical Organization

Introduction

Along with artifacts, the analysis of space and architecture can be an invaluable tool to the archaeologist as a means of understanding the sociopolitical organization of the people that they study. Among other things, architecture can identify the dynamic distribution of populations across a landscape (Chase and Chase 1987; Dillehay 2001, Dillehay and Kolata 2004, Dillehay et al 2009; Donnan 1973; Fletcher 1995; Stone 1997; Wenke 1997; Willey 1953; Wilson 1987, 1988), reflect the status of residents (Chase 1992; Shimada 1994), discover the presence and organization of specialized economic activities (Dillehay 2001; Dillehay and Kolata 2004; Keith 2003; Shimada 1994; Pozorski and Pozorski 1987), identify barrios (Keith 2003; Millon 1973; J. Topic 1982), and aid in the identification of labor organization (Dillehay and Kolata 2004; Hastings and Moseley 1975; Moseley 1975; Day 1982; T. Pozorski 1980; Shimada 1994), among many other things. One of the goals of this research is to elucidate the nature of sociopolitical organization within Jatanca primarily through an examination of ritual spaces within the compounds, the use of which was possibly revitalized via the purposeful manipulation of the collective social memory of the later North Coast Chimú culture at Chan Chan and many of its regional centers as well (see Chapter 9). In addition, by combining radiocarbon dates, architectural comparison, and ceramic data the sociopolitical development of Jatanca can also be examined from a regional perspective, in light of recent publications that focus upon the Peruvian North Coast (Attarian 2003, 2009; Donnan 2006, 2009; Millaire 2009, 2010).

While much has been written about Inca, Chimú, and Moche sociopolitical organization, comparably very little has been written about the groups associated with the Formative Period such as the Cupisnique, Salinar, and Gallinazo. For example, publications by the *Viru Valley Project,* initiated by Julian Steward in 1946 and exemplified by Willey's (1953) groundbreaking work on settlement patterns, remain an invaluable, primary source of information regarding Salinar and Gallinazo settlement patterns, architecture, ceramics, and sociopolitical organization within the Viru Valley. Lately, written work regarding Late Formative Period sociopolitical organization is usually of a very general nature and part of a larger work that focuses upon other contemporary North Coast groups such as the Moche (Bawden 1996; Millaire 2009; Moseley 1992; Shimada 1994). One notable exception is the work of Heidy Fogel (1993 – see also below) who focused her ceramic-based dissertation specifically upon the sociopolitical organization of the Gallinazo at the Gallinazo Group. As a result of her research, Fogel (1993) argued that the Gallinazo Group was the first urban settlement along the North Coast and that the Gallinazo were sociopolitically organized into the North Coast inter-valley state – some aspects of which others have since taken exception (Donnan 2009; Millaire 2009, 2010; see also below).

This chapter represents an attempt to define the Late Formative Period sociopolitical organization of Jatanca using primarily architectural data, ultimately leading back to discussions surrounding the role of the Plaza/Ramp/Platform Complex and the relationship of the compounds to the landscape. It is hoped that by combining access pattern analysis (see Chapter 6) with ideas regarding the social organization responsible for compound construction (see below), and hypothesis regarding the symbolic content of architectural form (see below) that the nature of sociopolitical organization at Jatanca can be elucidated. Indeed, it will be demonstrated that the compounds fulfilled a critical role in fulfilling specialized ceremonial and socially integrative functions. This chapter also represents an attempt to examine what role (if any) regional interaction may have played in the development of Jatanca. To this end, the work of Fogel (1993), along with the Norcosteño model (Donnan 2009; Millaire 2009) of regional development will be scrutinized. Ultimately, these efforts represent an initial attempt to understand this important organizational aspect of Late Formative Period life at Jatanca and along the North Coast.

Late Formative Period Sociopolitical Organization: Previous Work

In beginning this chapter, it would be of benefit to discuss how other archaeologists have viewed the sociopolitical organization of Late Formative Period cultures that would have been largely contemporary to, or overlapped in occupation with Jatanca. While the data bases used in these analyses vary (i.e. settlement patterns, architecture, ceramics) the results are largely the same; Late Formative Period cultures are regarded as having been sociopolitically centralized.

Wendell Bennett (1939, 1950) was among the first archaeologists to work at the Gallinazo Group. Bennett (1950) divided the development of the Gallinazo into four broad phases: origin, Sub-period I, Sub-period II, and Sub-period III. In terms of their origin, he was somewhat equivocal. Based primarily upon ceramic analysis, he felt that the adjacent northern highland area was perhaps the most likely "region from which these new migrants, or, if one prefers, new cultural influences" arrived in the Viru Valley.[1] Nonetheless, he also points out somewhat cryptically that additional evidence from the Cajamarca Basin[2] and/or the Pacasmayo (Jequetepeque) Valley may shed additional light on the problem of cultural development spanning the earliest Viru Valley inhabitants to the Mochica culture. With regard to the sociopolitical organization, Bennett provides little insight into the earliest phase of identifiable Gallinazo culture at the Gallinazo Group. Bennett argues that Gallinazo II, however, was "essentially a local development" that had sprung from the earlier Gallinazo I sub-period. Typical archaeological indicators of significant differences in social status such as a wide-range in the size and quality of households, differential mortuary treatment, the presence of elaborate ceramics, or textiles are lacking at the Gallinazo Group. Of interest to this section and below is that Bennett argued that the large house clusters that make up the site might "represent some form of unity, perhaps of the later *allyu* type" (1950:117). Bennett sums up Sub-period II as "…being quite drab without any particular emphasis

[1] It would appear that Bennett felt as though the Gallinazo origin was the result of migratory activity: "Whether the new population which is assumed to have moved from the northern highlands to Viru Valley represented invaders, or merely a peaceful infiltration of small numbers is not known" (1950:115).

[2] Although later in the same section, Bennett also somewhat confusingly states that the location of Gallinazo origins within the Cajamarca Basin is "less logical than the Callejón de Huaylas" (1950:115).

on artistic achievement, class distinction, or religious organizations" (1950:117). The lack of emphasis in these areas was necessitated by a need to concentrate upon the economic provisioning (especially subsistence) of the large population associated with the site (Bennett 1950). During the initial portion of Sub-period III, outside influences from the Moche and Recuay are noted within the ceramics and architecture of the Gallinazo Group. Hallmarks of Moche ceramics such as the stirrup spout vessel, the popper, and the face collar jar all appear for the first time within the Viru Valley (Bennett 1950). In addition, ceramics are better made and modeling is used extensively, while some are painted in a distinct Moche style (Bennett 1950). Architecturally, Bennett notes that Moche-style adobes are used to construct large pyramids that combined platforms and elaborate households, suggesting "marked religious advancement" and "the initiation of class distinction" (1950:117). Evidence of Recuay influence is also noted by Bennett, especially in the form of changes in mortuary treatment (the addition of stone-lined box tombs) and ceramic surface treatment - especially the elaboration of negative designs (Bennett 1950). In general, defense of the Gallinazo Group was never important (Bennett 1950). However, there may be evidence of periodic site abandonment and reoccupation caused by "local conflicts" as indicated by the presence of levels of wind-blown sand between flooring episodes (Bennett 1950).

While attributing the lack of artistic achievement and class development to a need to provision the Gallinazo Group seems to be an unlikely hypothesis at best, Bennett (1950) does raise a few points that are of interest. His argument that the northern highlands represented a likely point of origin for Coastal Virú Valley residents was based upon the early use of negative resist surface treatments on ceramics (see Chapter 4). Yet, early examples of this decorative technique have also been found within Jatanca (see Chapter 4), which may actually lend support to his secondary hypothesis that coastal interaction, perhaps centered within the Jequetepeque Valley, was also a factor in the development of the Gallinazo Group. With regard to the similarity in the domestic ceramics found within both valleys (see Chapter 4), Bennett's hypothesis could still be valid, although much better explanations as to why these stylistic similarities exist can be found in current literature (Donnan 2009; Millaire 2009).

To date, perhaps no archaeologists has written more about the Gallinazo than **Gordon Willey**. Willey (1953) spent years collecting and analyzing Viru Valley settlement data, and yet, wrote comparatively little regarding the specifics of their sociopolitical organization. Based upon population densities at the Gallinazo Group, the presence of long, valley-wide canal works, and the identification of specialized, corporate-produced architecture such as pyramid groups, Willey certainly considered the Gallinazo within the Viru Valley to have been organized within a state-like configuration of sociopolitical relationships (1953). However, defining the degree to which the Viru valley state was centralized eluded Willey who argued that it could have ranged from highly centralized to a loose confederation of sites that cooperated primarily out of a need to organize irrigational needs and infrastructure (1953).

Willey's Viru Valley work indicated that the base of Gallinazo political power shifted over time. During the Early Gallinazo, populations were concentrated in the lower valley, especially at the Gallinazo Group (1953). While Willey doubted that there were any pyramids associated with the earliest manifestations of the site, he did note the presence of large elaborately decorated plazas/courtyards that could have been used as "community centers" (1953). During the Middle and Late Gallinazo, several (at least 6) Viru Valley sites were anchored by a large pyramidal structure, indicating that they served as centers of "politico-religious" authority (Willey 1953). Since some of the pyramids are larger than others, it was argued that the entire valley was hierarchically organized, with the Gallinazo Group serving as the primary center of authority (Willey 1953). During Late Gallinazo, in addition to the Gallinazo Group, Gallinazo sites develop within the mouth of the valley. According to Willey (1953), this co-occurrence could be explained in a number of ways:

1. Power was still centered at the Gallinazo Group. The new valley neck settlements were subsidiary sites that were purposefully placed as a means of protecting water rights within the lower Viru Valley.
2. The outlying settlements had political autonomy, but "lived in relative harmony" with the Gallinazo Group and each other.
3. The valley neck sites were the center of power as the Gallinazo Group was abandoned due to either internal fighting, or invasion by the Moche located to the north.
4. The valley neck sites were the center of power as the Gallinazo Group was abandoned due to excessive amounts of soil salinity.

In terms of describing the actual foundation of power within the Gallinazo polity, as with the degree of political centralization, Willey vacillated somewhat stating that the power base could have been organized along "sacred or secular" lines, perhaps favoring slightly a scenario that favored more secular forms of control:

> "The great Pyramid Mound sites must have served as focal community points. These mounds may have been primarily religious or secular centers; however, as other data indicate a rising and highly competitive 'nationalism' along the north coast and elsewhere in Peru at about this time, it is logical to suspect that war leaders were coming to the fore of Gallinazo society." (1953:396).

Indeed, Willey (1953, 1971) argued that the construction of *castillos* at the valley neck indicated that war leaders were becoming more influential in the face of inter-valley competition with the Moche.

Willey (1953) also made numerous observations about the Salinar sites that were recorded during the Viru Valley survey, but had little to say regarding their sociopolitical organization. Architecturally, the sites were described as being made up of small clusters of agglutinated rooms made from a combination of stone foundation and conical adobe bricks. Scattered throughout the valley were numerous rectangular platforms, also constructed from conical adobes that "probably served as focal points of worship for the scattered populations" (Willey 1971:136). Notably absent from the

Salinar architectural "catalogue" were large huacas, which would soon become associated with later Gallinazo and Moche populations (Bawden 1996; Shimada 1994). Willey also argued that widespread social unrest characterized the Viru Valley during the middle Late Formative Period based upon the presence of numerous Salinar strongholds placed upon mid-valley hilltops (Willey 1953; 1971).

Willey's work is especially relevant in that it failed to identify any large huacas – a hallmark of later Gallinazo and Moche centers - within the Salinar sites. Instead, elevated rectangular platforms partially constructed of conical adobes may have served as the focal and ritual center of the sites. A similar situation occurs within Jatanca, which also lacks a large, adobe constructed huaca. While the Acropolis is elevated within its southern sector (see Chapter 6), one would be hard-pressed to assign it the same significance as the artificial mounds associated with sites such as Sol/Luna, Pampa Grande, and the Gallinazo Group. The lack of a large huaca and the presence of conical adobe bricks at both sites may indicate that in terms of traditionally identified cultural developments (i.e. see Shimada 1994), the construction and occupation of Jatanca is closer in time to that of the Salinar culture than the Gallinazo culture (but see also Donnan 2009; Millaire 2009).

A notable exception to the general Salinar settlement pattern identified by Willey within the Virú Valley is the Moche Valley's Cerro Arena (Brennan 1980, 1982) which was protected via its hilltop location and large population aggregation, which occupied the site until at least 180BC ± 220 years based upon a single radiocarbon date. The site itself has a dense accumulation of small agglutinated compounds and households, interspersed with religious, economic, and corporate facilities, reflecting the presence of a stratified population. According to **Curtis Brennan** (1980, 1982), Cerro Arena represented the first planned urban city within the Andean coast, created perhaps by the general social unrest recognized by Willey (1953) within the adjacent Viru Valley during the middle Late Formative Period (Brennan 1980, 1982). In this scenario, the social stress associated with endemic warfare encouraged populations to aggregate and to develop creative solutions in social management to the many problems associated with incipient urban life (Brennan 1980, 1982). While the "planned" nature of the site seems to be a reasonable assumption, Brennan's argument that Cerro Arena is a "city" could certainly be contested based upon criteria outlined in Chapter 2.

When compared, it is clear that Jatanca and Cerro Arena are very different sites – despite the overlap in occupational chronology. Cerro Arena utilized the topography in a defensive manner, while Jatanca was situated in the middle of an open pampa (see Chapter 3). Therefore, it would be difficult to attribute any hypothesized trends toward sociopolitical centralization or architectural agglutination at Jatanca to endemic warfare as may have been the case at Cerro Arena.

David Wilson (1987, 1988) undertook a total survey of the Santa Valley, located to the south of Viru. According to Wilson's research, when compared to the early-middle Gallinazo, the Late Gallinazo (Late Suchimancillo) was a time of great increase in socio-cultural complexity resulting in the development of numerous chiefdom societies, but no "disproportionately large corporate center" that could be considered a unifying symbol of the valley (1987, 1988). Unlike in the Viru Valley, warfare (probably of an inter-valley nature) appears to have been a major social stress as Wilson identified some 42 "citadels" and numerous smaller defensive sites dispersed among large-scale irrigation (1987, 1988). Wilson (1988) further argues that the Viru and Santa Valleys never joined politically due to the presence of this well-developed defensive system within the latter valley.

Heidy Fogel (1993) adopted Willey's position on the presence of a Gallinazo state and argued that the Gallinazo represent the first North Coast multi-valley political state (but see also Schaedel 1972). Based primarily upon her analysis of ceramic material and an examination of previous settlement and excavation work conducted by Bennett and Willey (among others), Fogel (1993) argued that the Gallinazo Group was the urban capital of a multi-valley state that stretched from the Santa to the Moche Valley, and perhaps beyond into the Chicama as well. The presence of strategically located Gallinazo fortifications, administrative centers, inter-site roads, and associated checkpoints within these regions are also used by Fogel (1993) to argue for the presence of a multi-valley Gallinazo state. Unlike Willey, Fogel was unequivocal with regard to the degree of political centralization, calling it “forceful and complete.”

Unfortunately, as pointed out by Donnan (2009), Fogel relied heavily upon the presence of domestic ceramics traditionally identified as “Gallinazo” (i.e. Castillo Incised and Castillo Modeled – see Chapter 4) in determining the cultural affiliation of sites (see also Chapter 4). Given that the domestic ceramics may not be as much affiliated with specific cultures as they are the product of a shared ethnic background (Donnan 2009; Millaire 2009 – see also Chapter 4), Fogel (1993) over identified the number and distribution of Gallinazo sites, negating the validity of much of her work. Therefore, the degree to which the Gallinazo represent an inter valley expansionistic state that acquired territory in a forceful manner must be called into question.

Garth Bawden has also considered Gallinazo sociopolitical organization – especially as it related to contemporary Moche centers. Bawden (1990, 1996), like Willey and Fogel, argues that the Gallinazo within the Viru Valley were centrally organized. One indicator of this is the rejection of tapia in favor of non-bonded adobe segments for public construction projects (Bawden 1996). Bawden (1996) argues that this transitional in construction material and technique indicated that the Gallinazo had developed a system by which labor from surrounding communities could be taxed and tabulated by an elite group – an accounting system later used by the Moche (see Hastings and Moseley 1975; Moseley 1975) as well. In addition, the sheer size of the platforms (Chapter 2) could also be viewed as “vividly projecting the grandeur and authority of their builders” to command obedience and mobilize the labor of the Gallinazo Groups constituents (Bawden 1996:188). That North Coast elite authority increased in general rather dramatically during this time is noted by the presence of large platforms interspersed throughout the Gallinazo group that housed the activities of administrators and their retainers. Some of these platforms were attached to elaborate households that were the likely residence of Gallinazo group leaders (Bawden 1996). Furthermore, high ranking individuals, as indicated by their place of interment and the number and quality of associated grave goods, were interred within these same areas attesting to “their superior position” (Bawden 1996).

Izumi Shimada has also considered the sociopolitical organization of the Gallinazo as a means of better-understanding the emergence of the Moche. Shimada (1994), utilizing data collected from previous projects and his own work, identifies several key developments that occurred during the Late Formative Period along the North Coast:

1. Sustained population growth
2. Successful irrigation agriculture
3. Persistence of the ceremonial civic center as an institution of sociopolitical integration
4. Functional differentiation, political centralization, and hierarchical ranking of settlements (implying the presence of chiefdoms)
5. Dynamic peer polity interaction among the various sites

Unlike Willey and Fogel, Shimada argues that in general the Gallinazo were socio-politically organized into independent chiefdoms that interacted as peers (1994). In this model, nearby interacting pairs of developmentally similar sites (chiefdoms) do not dominate one another; with the results being that ultimately both groups benefit from the relationship (see Renfrew and Cherry 1983).

Shimada has also examined this issue from valleys other than those associated with the Gallinazo core of Viru and Moche, providing scholars with a much-needed point of geographical comparison from the northern North Coast. Perhaps one of the more interesting conclusions he has reached related to Gallinazo sociopolitical organization is that at the Lambayeque site of Pampa Grande. According to Shimada, settlement data indicate that during the Moche V Period the Moche subjugated the Gallinazo (possibly by restricting their water supply) and forced them to farm Moche fields under the supervision of their “traditional leaders” (Shimada 1994). These Gallinazo inhabitants were also restricted by the Moche in terms of their movement throughout the site, and were sequestered within specific, poorly-built compounds (Shimada 1994). Again, however, in light of the recent *Norcosteño* model (see Chapter 4) championed especially by Millaire (2009) and Donnan (2009), some aspects of Shimada's argument could be called into question if domestic wares served as the primary means of differentiating between "Moche" and "Gallinazo" sites (see also below).

Finally, a recent publication edited by **Jean Francois Millaire** (2009) numerous scholars examine the relationship between Late Formative Period-Early Intermediate Period culture groups (such as the Gallinazo) and the subsequent Moche culture that dominated the North Coast for some 600 years (Bawden 1996; Pillsbury 2001; Shimada 1994). This book is concerned primarily with issues related to cultural identity as examined via ceramic (see Millaire 2009, Donnan 2009, Franco and Gálvez 2009; Makowski 2009) and mortuary (Chapdelaine et al. 2009; Gagné 2009; Sutter 2009) data sets, and as such does not focus much upon broader issues related to sociopolitical organization of Pre-Moche groups – especially as identified by architectural data.. One notable exception to this is **Chris Attarian** (2009) who worked within the Chicama Valley, located directly to the south of the Jequetepeque Valley, at the site of Mocollope. Attarian (2009) argued that during a period of time between 200B.C. and A.D. 200, sociopolitical control at Mocollope became highly centralized based upon several factors such as changes in settlement patterns, which indicated an increase in Mocollope's population apparently at the expense of contemporary hinterland sites, and increase in control over the production of craft goods and storage, as indicated by architectural data associated with monumental constructions (Attarian 2009). As local populations and the economy became concentrated within Mocollope, this created a situation where opportunities for sociopolitical centralization were simultaneously increased (Attarian 2009). Ultimately, this resulted in a condition of "ethnogenesis" and the creation of a new social identity at Mocollope from a substrate of formerly "cohesive" rural village populations (Attarian 2009; see also below).

Of special interest with regard to Attarian's work is the degree to which it underscores the complex regional differences in sociocultural dynamics that were occurring within the same approximate time range, despite the relatively close proximity of neighboring valleys. Whereas evidence indicates that Late Formative Period settlement pattern dynamics within the Chicama Valley resulted in the development of an "urban" center and "ethnogenetic" sociopolitical activity, this does not appear to have been the case at Jatanca where there is no regional evidence that relatively rapid population centralization/hinterland abandonment (let alone ethnogenesis) was responsible for the site's development. In addition, the architectural evidence at Mocollope of centralized control over craft production and storage activity has yet to be identified at Jatanca (see Chapter 7), nor has the range of social differentiation. It would appear that the sociopolitical organization of Mocollope and Jatanca were quite different and that the two sites might represent extremes in the range of potential development, underscoring the idiosyncrasies of site and regional development, despite the presence of shared cultural hallmarks identified by archaeologists in typical media such as ceramics and architecture. This research will return to these issues below.

To sum: it is clear that there is little consensus regarding the form of sociopolitical organization during the Late Formative Period other than to say that there was a *general* move toward some degree of sociopolitical centralization. Some scholars (Fogel 1993) see the Gallinazo heartland as having been organized into a multi-valley state, while others (Shimada) see it as having been composed of chiefdoms engaged in peer polity interaction. The foundation upon which centralized political control rests is left largely unexamined, although Willey (1953, 1971) hints at a secular basis of power due to emerging war leaders. Within the Lambayeque Valley, Shimada depicts the Gallinazo as being ultimately subjugated by the Moche and forced into a life of servitude. Finally, the adherents of the *Norcosteño* model would consider any of the above models of sociopolitical organization and development dubious if site identification and interaction was identified via the use of domestic wares. In fairness, this disparity of opinion relating to Late Formative Period sociopolitical organization may be at least partially due to the fact that all of the above scholars worked with different data sets, during different decades, within different valleys, and during a range of time periods in attempting to examine different issues and resolve very different questions. For example, in the case of Fogel (1993) data related to domestic ceramics were not adequately understood at the time she was conducting her research (see Donnan 2009; Millaire 2009).

What is also of interest to this chapter is the architectural variation found among the Late - Terminal Formative Period sites – especially in light of their hypothesized sociopolitical organization. Some sites, such as the Gallinazo group are characterized by the presence of several large structures of monumental proportions, while others, such as Cerro Arena lack such features – despite the fact that both sites are located in adjacent valleys and were identified as being the product of societies that were sociopolitically centralized. Jatanca, likewise, is architecturally unique, being composed of large, free-standing compounds that served as important loci for ritual activity of varying scale, in addition to political and domestic activity as well (see Chapter 7). Yet when the architecture and spatial organization at Jatanca is compared to that of nearby Mocollope (Attarian 2003, 2009), it is clear that the sites are of a very different nature, despite having been occupied during the same approximate point in time.

It is the goal of the remainder of this chapter to examine the nature of Jatanca's sociopolitical organization from an architectural perspective in order to better-understand potential meanings associated with its relatively unique emphasis on free-standing compound architecture and internal complexes such as the PRPCs. Does the use of this form (as opposed to those from other valleys) imply that Jatanca is organized in a less or more sociopolitically centralized manner than other contemporary sites? Are the compounds at Jatanca emblematic of highly regionalized cultural developments as was the case with regard to the manufacture and use of "corporate style" ceramics (see Chapter 4; Donnan 2009; Millaire 2009)?

The Interpretation of Sociopolitical Organization at Jatanca

The organization of sociopolitical structure within a region or site has been interpreted from architecture data via a number of theoretical and conceptual assumptions. Settlement patterns have long-been studied in an effort to understand sociopolitical relations on a regional scale as inter-site dynamics and shifting relations of power can be preserved and projected across the landscape, especially through variations in architectural size, form, and function (Bawden 1982, 1996; Dillehay et al. 1998, 1999, 2000, 2009; Dillehay 2001; Dillehay and Kolata 2004; Donnan 1973; Isbell 1977; Mackey 1990; Moore 1996; Willey 1953; Wilson 1988). The identification of patterns of graded access (see Chapter 6) has been used to argue for the presence of social segments based upon the theory that unequal access into monumental architecture indicates the presence of underlying social inequities (Feldman 1985, 1987; T Pozorski 1982; 1985). Based upon patterns of relatively unrestricted access, Mackey and Klymyshyn (1990) argued that some of the compounds at Manchan were used for the short-term storage of bulky comestibles on their way ultimately to Chan Chan. It has also been argued that the "monumentality," of architecture can be used to identify processional routes used in ritual and attempts on the behalf of certain sociopolitical segments to project a powerful, enduring image across the landscape to others (Conklin 1990; Moore 1996; see also Higuchi 1989). The theory that groups organized in a "corporate" fashion were responsible for many of the monumental structures associated with the Pre-ceramic, Gallinazo, Moche, and Chimú has also been identified based upon re-occurring patterns in construction (Feldman 1985, 1987; Hastings and Moseley 1975; Moore 1996; Moseley 1975). Construction sequences have been used to identify a range of sociopolitical systems from household-base rituals designed to prolong sociopolitical centralization in the face of external change at San Luis (Dillehay 2004), to the presence of co-rule (Netherly 1990) and dynastic continuity at the Chimor site of Chan Chan (Moseley 1982). The latter example is especially important as Chan Chan's compounds were constructed and occupied sequentially (Kolata 1990) - a possibility demonstrated at Jatanca as well with regard to the Acropolis and the subsequently constructed Compounds I-IV (see Chapter 6). Many of the above theories, concepts, and associated methods can be employed in an effort to define the sociopolitical organization at Jatanca at the level of the site, the valley, and the region.

Architectural Access Patterns and Sociopolitical Organization

In Chapter 6 it was argued that interior compound access was of a restricted nature. Doorways tend to be very narrow, baffled entries are employed to increase the privacy of activities conducted within adjacent rooms, hallways often wind about in an indirect manner, and Compounds II and III both have architectural features (PRPC Variants) that provide a convenient place from which to potentially oversee foot traffic in and out of the building. Within this restricted environment, ritual areas such as the Secondary PRPCs, PRPC variants, and the PDSP were located out of sight to those not standing within their interior. In addition, the Ramp/Platform room was elevated above the adjoining North Plaza. While part of the rationale behind this difference in elevation could be associated with staging visually-oriented rituals, elevation also demarcated differences in status-based spatial access. As Moseley (2001:118) has noted, “Elevated architecture conferred status segregating ordinary from extraordinary space….” The implication of this is that not all of Jatanca’s constituents had equal access to these areas. Indeed, perhaps only a very small percentage of the total population was sanctioned to enter interior rooms located near the end of the access chain. The identification of “open” versus “closed” access patterns into monumental, or “public” architecture, is an important, if not standard archaeological means of identifying the absence or presence of formal social hierarchies operating within archaeological sites. But how can one examine these data (methodologically and theoretically) in order to identify social segmentation?

At this juncture, the significance of this restricted access in terms of sociopolitical organization needs to be addressed. What does restricted architectural access mean from a sociopolitical perspective? How can differential access to areas such as the Secondary PRPC or the PDSP Complex be interpreted? Can restricted access patterns be used to identify the presence of distinct social classes or Weberian status grades within the broader Jatanca constituency?

The built environment has been studied in a myriad of ways such as examining the body in space (Tuan 1974, 1977; Moore 1992, 1996, 2005), the impact of architecture on behavior (Rapoport 1982; Moore 1996), and the "meaning" of architectural monumentality (see Higuchi 1989; Moore 1996) to name but a few examples. At this point, however, I am going to concentrate upon the intersection between ideology and spatial/architectural organization. Ideology is a vast topic and has been defined by social theorists and archaeologists in a multitude of ways (see Conrad and Demarest 1984; Demarest and Conrad 1983, 1992; Foucault 1979; Janusek 2004; Leoni 1984). In essence ideology is the conflation of meaning and power (Comaroff and Comaroff 1991; Giddens 1984). Following Friedrich (1989:301), ideology constitutes, "…ideas, strategies, tactics, and practical symbols for promoting, perpetuating, or changing a social and cultural order; in brief, it is political ideas in action" (see also Gilman 1989). I will thus privilege consciously negotiated indigenous social theories and cosmological precepts that may have been inscribed in Jatanca's built form.

It must be noted that while ideology can be used as a tool in legitimating or contesting power relations, as Moore (1996) points out, this is not to say that ideology always functions as an instrument in justifying the creation or maintenance of social segregated divisions within a group as can be demonstrated by examining the attitudes of 19th century Utopians, or 20th century Hippies, only that it *can* be used in such a manner. It should also be pointed out that by no means do I argue that there is one, and only one overarching, or "monolithic" ideology that can be associated with any given group of people at any given time. In fact, it seems likely that there would have been competing ideologies among Jatanca's constituents, just as there are within the otherwise apparently unified associations, religious organizations, political parties, and communities, etc that we know today (Dobres and Robb 2000). Indeed, truly unified ideologies are perhaps more of a superficial perception, than they are a monolithic reality. However, as Janusek states, "The predominant ideology at any one time is usually that of a dominant group" (2004:14), and it is this group that is generally responsible for the construction of enduring monumental architecture within prehistoric sites such as the compounds that make up the urban core of Jatanca, thereby codifying their ideological beliefs within the built environment. Of course, the materialization of ideology (understood in this analysis as consciously articulated or contested material practices and their representations) instantiated in the production of space can tend to the actual naturalization of power relations (as hegemony). A quote by Leone (1984) sums up many of the key ideas in the above paragraph:

> "Ideology takes social relations and makes them appear to be resident in nature or history, which makes them apparently inevitable. So that the way space is divided and described, including the way architecture, alignments, and street plans are made to abide by astronomical rules, or the way gardens, paths, rows of trees, and vistas make a part of the earth's surface appear to be trained and under the management of individuals or classes with certain ability or learning, is ideology."

In analyzing North coast creation myths and dynastic myths recorded by Calancha (1638), Augustinians (1865), and Valboa (1586) Jerry Moore (1996) was able to identify two overarching themes which are of interest to this section because of what they say about the relationship between ideology, architectural access, and status.

1. Different social groups originated in different ways. "A commoner in North Coast society was separated from the elites not solely by secularized class distinctions, but by the legends of kingship and the myth of creation" (1996:179).
2. Elite figures within cosmogonic origin myths were physically separated from others via the use of man-made structures. "It would seem that physical separation implies special status…." (1996:179).

Moore rightly points out that there could be an ideological justification for an architectural pattern that is typical of the North Coast throughout prehistory, that of the combination of restricted access into monumental architecture. Other archaeologist have also noted this general pattern and attributed it to differences in status, while not necessarily further attaching the pattern's origin to an ideological foundation. For example, Quilter (2001) points out that access to the summit of the central mound at Cardal was probably relatively restricted when compared to adjacent plaza areas, which could have been the loci of large-scale ritual activity (Quilter 2001). At the site of Aspero (see also Chapter 2), Feldman (1985, 1987) noted that the Huaca de los Idolos had a relatively restricted pattern of access, despite having been the product of corporate labor activity (see below). In other words, despite the participation of many in the huaca's construction, it appears that only a limited few were able to access the interior. Feldman based this conclusion upon the presence of doorways that diminished in width ("graded access") the further one advanced into the interior of the Huaca, and the relatively small size of the innermost rooms (Feldman 1985, 1987). In addition, the most ornately decorated rooms and the most elaborate caches were located within the more interior rooms (1987). Feldman (1987:11) states, "The pattern of ornamentation and increasingly restricted access suggests levels of ceremonial space open to selectively more and more restricted groups of people." Based upon the architecturally inferred presence of an elite group, Feldman (1985, 1987) argued that Aspero was sociopolitically organized into a non-egalitarian society.[3]

Feldman (1985, 1987) also made comparisons between the access patterns associated with coastal and highland monumental architecture, resulting in several conclusions of interest. First, the repetitious patterning of the largely undifferentiated single room highland temple at sites such as Kotosh, Huaricoto, and La Galgada, indicated that there was less social differentiation among highland groups than did the large, unique (within the immediate landscape), monumentally proportioned ceremonial architecture of the coast (see also Burger 1993, 1995; Burger and Burger 1985; Grieder 1988). Second, Feldman (1985, 1987) also argued that coastal populations may have been larger and more stable than their highland counterparts, which resulted in the development of highly visible ceremonial architecture fronted by large plazas that allowed site-wide participation in at least some aspects of ritual, but not all as indicated by the presence of graded access into many of the large huacas.

Tom Pozorski (1980, 1982) has also used the combined presence of graded access, decreasing plaza size, and increasing ornamentation within the Huaca de los

[3] Feldman (1987) argued that "Aspero society was what may be labeled a chiefdom…."

Reyes to argue for the presence of status group divisions at the site of Caballo Muerto (see also Chapter 3). Plaza I and Plaza II, the most easily accessible and largest, were probably used for rituals in which the "common people" could participate (T. Pozorski 1980, 1982). Plaza III, on the other hand, is much smaller and more restricted in access, making it likely that it was probably used by a more exclusive segment of society. Beyond Plaza III, is the smaller still "inner sanctum," which was probably accessible to only the most elite members of society (T. Pozorski 1980, 1982). Based upon the above data, Pozorski (1980:109) argues that "…Huaca de Los Reyes is one of the best-preserved examples of such a chiefdom-built site along the entire North and Central Coast of Peru."

At the Moche site of Galindo (see also Chapter 3) Garth Bawden (1982) used spatial, ceramic, and architectural data to demonstrate the presence of status group divisions at the site level. He argued that the series of walls and topographic divisions were used to divide the site into apparent sectors, and functioned as a means of social control that privileged a group of "ruling elite" over a non-elite group and that "social stratification was rigidly endorsed" (but see also Topic 1983). This control was especially marked by differential access to large storage areas (Bawden 1982). Bawden (1982:317) states:

> "The ruling class dwelled in exclusive residential areas and was probably headed by a paramount ruler who lived in a large huaca-compound palace. Control of the extensive storage areas found at Galindo was in the hands of the administration. These areas were so restricted in access as to imply that they were of great economic importance to the settlement and the surrounding valley."

While none of the above examples make it explicit, In light of Moore's recent work (1996), it seems obvious that the restricted (or "differentiated") access patterns associated with Huaca de los Idolos, Huaca de los Reyes, and Galindo may be a reflection of a North Coast ideological thread that mandated social separation during at least some political, social, economic, administrative, and/or ritual events resulting in the creation of likewise differentiated histories anchored sociopolitically by lineages and/or leaders, and further expressed physically by the form and organization of monumental architecture (see below; Chapter 9). For example, the ideology of separation was manifest architecturally, at least in part, in the form of differential access into specific areas of monumental architecture within which could occur a range of activities, some of which perhaps all segments of society could participate, and others for which only a limited number of people were sanctioned to participate. In the case of Je-1023, it may also have been manifest in the form of the individual, free-standing compounds. It should be reiterated that to the vast majority of the residents of these sites, this social separation, or unequal architectural access was considered to be a natural state of affairs, the justification for which existed either in issues of cosmogony, or within the hazy mists of time immemorial. At this point, we can now turn our attention to a discussion of the meaning of the restricted access patterns associated with Jatanca's compounds.

Jatanca, Access Patterns, and Sociopolitical Organization

The first thing to note with regard to access patterns at Jatanca is that there are no walls, moats, or natural features that serve as any kind of a barrier to entry. This stands in direct opposition to sites such as Pacatnamú, which is located within a highly defensible position surrounded by a combination of deep escarpments and a concentric system of walls with non-aligned ramparted entries (Hecker and Hecker 1982; Donnan 1986; Ubbelohde-Doering 1966). Likewise, the open pattern of access into Jatanca differs from that of Cerro Arena where the natural topography was used as an additional aid in site defense (Brennan 1980, 1982). The exact meaning of Jatanca's lack of fortifications in terms of broader regional sociopolitical organization is unclear. Certainly, it could be argued that during the time right up to abandonment, the constituency of the site did not fear aggression or attack from either an intra or inter-valley adversary.[4] It is also important to note that there are no physical barriers that

[4] Of course, this is not to say that the defensive position and wall system that enclosed Pacatnamú was strictly defensive in nature. Donnan (1986) argues that the walls and non-aligned entries could also be of symbolic value, providing separate entries, or gateways for males and females on a pilgrimage to Pacatnamú. .

restrict access between either sectors of the site, or the compounds, as is the case at Galindo (Bawden 1982, 2001; but see also Topic 1983) or Pampa Grande (Shimada 1994). Indeed, today intra-site travel is restricted only by barchans dunes and the need to circumnavigate around the lengthy exterior walls of the compounds. Therefore, access into, and within the perimeter of the site is unrestricted.

As demonstrated in Chapter 6, however, access into the compounds is an entirely different matter as there is only a single narrow doorway within the north wall that permits entry into the Primary PRPC. In addition, entry into Compounds II and III can be made only after first passing by ramp/platform features, which could have served some kind of a supervisory role. To proceed beyond the Primary PRPC and into the more "intimate" Secondary PPRCs, PRPC Variants, or PDSP, one must pass between the bilateral ramp/platform features.

This sequence of graded access, from larger to more intimate ritual settings, accords well with that described at Aspero, and especially Huaca de Los Reyes.[5] The large Primary PRPC was probably used by a much larger group of people (perhaps site-wide access) than were the subsequent plazas, as determined by their smaller size and relatively isolated location. The fact that the Primary PRPC is located at the entry of the compound fits within Feldman's observation that coastal monumental architecture is often fronted by a large plaza in order to accommodate large resident populations (see Chapter 2) during ritual/ceremonial activity. In this case, however, rather than fronting a tall pyramid, which could have served as the "stage" at Aspero, the north plaza fronts the ramp/platform room.

In determining the actual number of status group divisions residing within Je-1023's core area, one can easily identify the presence of at least two: those who lived within the compounds, and those who lived around the compounds. However, it may be possible to detect the presence of more social segments. Based upon the number of distinct nested ritual areas, Pozorski (1980, 1982) argued that there were at least three status group divisions associated with ritual activity at Huaca de los Reyes. If one were

[5] This same sequence of graded access to ritual areas also occurs at the Late Intermediate Period site of Chan Chan. This significance of this architectural similarity will be discussed at length in Chapter 9.

to apply the same logic to Jatanca, a similar number results. For example, in compound III, the Primary PRPC was used by "commoners" (to use Pozorski's term); the Secondary PRPC was used by a more exclusive group; while the PDSP Complex was used by a still more elite group. Compounds I, II, and IV[6] also have at least two examples of graded access associated with ritual areas.

Both Feldman (1985, 1987) and Pozorski (1980, 1982) utilize the presence of graded access at Aspero and Caballo Muerto as a partial line of evidence to argue for the presence of a "chiefdom" form of rule at their respective sites. It should be noted that I wish to avoid using such a narrowly defined term to describe the obviously complex, nuanced continuum of North Coast sociopolitical development. Furthermore, I do not want to imply the presence of a centralized governing body such as that generally associated with "Chiefdoms" (Lewellen 2003). The nested ritual areas within Jatanca do, however, argue for the presence of a somewhat fixed differentiation among social group divisions ranging from those who were permitted entry only into the Primary PRPC, to those who had access to the PDSP, or used the compounds as their primary place of residence. Indeed, access patterns combined with the size and location of ritual areas (see Chapter 7) and an ideology of separation argue for the presence of at least two, if not three, general status group divisions.

Compound Construction: Tapia Segments and Corporate Labor

It has been argued (Feldman 1985, 1987; Hastings and Moseley 1975; Moseley 1975; Shimada 1994) that the principle by which labor was organized to construct monumental architecture along the North coast was organized in a "corporate" nature, implying that many of the trappings one associates with a modern-day corporation such as a hierarchically organized network of administrators, "accountants," and laborers. For example, Feldman (1987:11) defines corporate labor as:

[6] It is also possible that Compound IV is similar to Compound III and has a third ritual area that is covered by the large stationary dune that obscures its southwest sector.

> "…group labor that draws its work force from separate households, either from within a single community or from separate communities. The laborers work together in a collective, integrated manner for a specific purpose, which is defined and sanctioned by an authoritative body that coordinates the project and to which the will of the individual laborer is subservient while the laborer is participating in the project."

While this form of labor organization has also been identified at other later North Coast sites such as Chan Chan (Moseley 1975), Pampa Grande (Shimada 1994), Pacatnamú (McClelland 1986), and El Brujo (Willey 1953; Galvez and Briceño 2001), perhaps the best Andean example of corporate labor and how it was mobilized in monumental architectural construction is that of the massive Moche huaca, Huaca del Sol, located in the Moche Valley (Hastings and Moseley 1975; Moseley 1975; see also Bennett 1939). During the early Colonial Period, the Moche River was diverted so as to hydraulically "mine" Huaca del Sol for artifacts, primarily gold (see Kosok 1965). As a result, a massive cross-section of the huaca's interior was created, exposing adjacent non-binding columns of adobe brick.[7] In many cases, long stretches of these columns contained bricks of almost identical shape, soil content, and the periodic inclusion of bricks with distinct "makers' marks" imprinted on their surface (Hastings and Moseley 1975; Moseley 1975). This evidence suggests that portions of each column were erected by a specific work crew drawn from the surrounding community as a means of paying a labor "tax" enacted by the leaders of the polity (Moseley 1975). Moseley also quite clearly indicates that Moche corporate labor is hierarchically organized and can be loosely modeled after a modern-day corporation:

> "The Moche Valley model of organizational principles is compatible with the hypothesis that manpower was mobilized by means of a labor tax system. In other words during construction the work performed by a party or social group was carried out as fulfillment of obligatory support owed to the authority initiating and sanctioning the project. In specific terms this argument would see makers' marks as identifying social units given separate status for taxation purposes, and segments as the units of measure of labor by which obligations were paid (1975:195)."

[7] This building technique is also known as "segmentary construction."

Obviously, Moseley (see also 2001) is extending his theories of Moche government, which he sees as having been a highly centralized expansionistic state, into the realm of labor organization. Therefore, in a sense, the use of corporate labor in the construction of large huacas is yet another tool of the state.

It is also of interest to note, that the identification of corporate labor has been deployed to argue for the presence of a centralized form of rule within some very early coastal polities. Although lacking any evidence of segmented construction, or makers' marks, Feldman (1985, 1987) nonetheless argued that the Huaca de los Idolos at Aspero had been built using corporate labor. He based this upon criteria such as the size of the huaca, the presence of *shicra*,[8] special architectural decoration, and the lack of domestic garbage on the floor of interior rooms. The use of corporate labor was then invoked as a partial line of evidence that Aspero had been sociopolitically organized as a "chiefdom."

I might argue, however, that Moseley and especially Feldman both overemphasis the implied role of centralized government in the creation and management of collective labor systems. According to Richard Burger (1995) centralized government was not a prerequisite of collective labor which occurred long before the development of the coercive state, or significant distinctions in socioeconomic stratification. Burger (1995) argues that the basis for public works was of a more religious, or social in nature. The community owned and controlled critical resources such as land and water via the establishment of relationships with ancestors, both real and imagined. The individual validated their community membership by willingly participating in organized group activities such as the construction of public architecture and canals (Burger 1995). Those that refused to participate were excluded from accessing resources such as land and water (Burger 1995). Given that religious worship (especially of ancestors) was a key means of defining group membership in the Andes, numerous corporate labor projects created areas that provided a focuses for ritual activity (Burger 1995). For

[8] *Shicra* are reed-woven baskets containing large clumps of earth and stone that can be carried by an individual. They were typically used as fill within the base of large public works such as huacas and platforms.

Burger then, it would appear that the presence of a centralized sociopolitical system is not necessary for the construction of monumental architecture, but can instead also be produced via a belief in the primacy of the community.

An additional example of what would be categorized as monumental architecture produced via the efforts of non-sociopolitically centralized activity is found at the site of San Luis (Late Initial Period) in the Zaña Valley. The monumental core of this site is made up of two east-focused, U-shaped structures composed of a central platform and two parallel extending arms that form a central plaza (Dillehay 2004). The north structure is 4 meters high, 80 meters long and 120 meters wide, while the south structure is 3 meters high, 89 meters long and 250 meters wide (Dillehay 2004). The combination of the large size and "planned," replicated appearance of these structures might indicate that they were the product of a centrally-organized community. Dillehay (2004), however, argues that this was not the case. Based upon the analysis of both horizontal and vertical stratigraphy (and micro stratigraphy) the construction of these structures appear to have been the result of countless "individual ritual episodes" performed at the level of the household, and were designed, in fact, to "extend the negotiatory space between local households" and stave off sociopolitical centralization in the face of socio-environmental change and increasing inter-valley influence (Dillehay 2004:256). To sum: centrally organized, corporate labor was not responsible for the construction of the two U-shaped structures that make up the core of San Luis.

Therefore, it could be said that the term "corporate labor" with all of its centralized, hierarchical trappings is subject to overuse, or over application – especially when invoked as a means of explaining the labor organization responsible for the construction of monumental architecture. Furthermore, based upon Burger (1995), it could also be argued that just because labor acts collectively in its organization and goals, does not mean that their efforts are guided by a central government. As Dillehay (2004) argues, the construction monumental architecture can in fact be the result of active efforts to *delay* sociopolitical centralization. Therefore, the collective labor output of a group of individuals working toward a final goal is not necessarily "corporate labor," nor does it require the presences of a centralized ruling body and attendant bureaucracy. Indeed, in many cases the term "community-based labor" might be better-used to describe the organization of work parties that are not associated with the trappings of a centralized government and a supervising bureaucracy.

Turning our attention to Jatanca, the size and repetitious form of the major compounds would indicate that some kind of a coordinated labor force was used in their construction. In fact, the vast majority of the monumental architecture is constructed almost entirely of short segments of tapia (about 2 meters in length) that form large, non-binding rectangular blocks (see Chapter 3 and 6; see also Dillehay et al 2009; Hecker and Hecker 1990; Ubbelohde-Doering 1966). The segments, as with the brick columns at Huaca del Sol are remarkably uniform in proportion, and might represent something more than just a chance occurrence, or a physical limitation associated with the construction process.[9] Based upon Moseley's work (1975; see also Hastings and Moseley 1975), and somewhat contra Bawden (1996), it could be argued that the compounds at Je-1023 are the product of corporate labor organization.

Unfortunately, architectural construction techniques employed at Jatanca alone cannot demonstrate unequivocally the use of either a "corporate" or a "community-based" form of collective labor. However, the data that might indicate the *presence* of corporate organized labor in the construction of the Jatanca compounds are lacking. For example, the ability to physically demonstrate the fulfillment of a work obligation was obviously a key component in corporate labor organization as defined by Moseley (1975). This was done at least two organizational levels: material production, and construction output. At the level of material production, some bricks were imprinted with makers' marks that could be used to physically demonstrate the fulfillment of a labor-tax obligation. At the level of construction output, the fulfillment of labor tax was once again demonstrated, this time in the form of easily identifiable (and quantifiable) non-binding columns as exemplified at Huaca del Sol. At Jatanca, however, the

[9] Rammed earth construction is still used within the Northern Highlands. Unlike Jatanca, the segment length varies greatly in modern-day constructions from as short as one-meter, to as long as approximately 10 meters.

individual wall segments lack any kind of a makers' mark or symbol that could be used to identify specific work output with a specific crew as does the subsequent job of plastering finished wall segments. Without a makers' mark or column construction techniques, keeping track of labor requirements "paid" in the form of materials production and labor - even on small-scale projects - would have been difficult at best. Obviously then, a key component in corporate labor as defined by Moseley (1975) is the ability of the work party to unequivocally demonstrate the fulfillment of an obligation to an administrative body. Yet this critical signature associated with corporate forms of labor organization are absent from Jatanca. Despite the presence of consistently-sized tapia segments, there is no evidence that the labor used in construction was organized in a corporate form as defined by Moseley (1975), due in part to the lack of any kind of a makers mark associated with individual wall segments. Furthermore, the abutting segments that make up the wall lengths have no breaks, or markers that might mark the beginning or end of a construction obligation as was the case at Chan Chan[10] (Conklin 1990; Day 1982; Moseley 1975). It could be argued that if community labor was organized along lines of kinship, however, these "accounting" features would not have been necessary in the first place. Indeed, I would further argue that the lack of an identifying mark on the bags of *shicra*, used in the construction of the Huaca de los Idolos at Aspero argues against the presence of a centralized form of government and strictly corporate labor as identified and defined at Sol/Luna by Moseley (1975). To argue otherwise is to potentially overextend notions of political centralization in polity organization.

To sum, collective labor was obviously employed in the construction of Jatanca as evidenced by the size of the site. Based upon the presence of the consistent, 2 meter-length sections used in wall construction, some might argue that this is an indicator that hierarchically organized corporate labor groups were used to build the site. Based upon the data above, however, it seems unlikely that corporate labor as

[10] At Chan Chan, construction obligations were tracked not so much by non-binding columns, but by the placement of wooden sticks on top of the walls that indicated the fulfillment of labor obligations (Conklin 1990; Moseley 1975).

defined by Moseley at Huaca del Sol was used to construct Jatanca as no attempt was made to identify work output associated with either material construction, or construction output. As Bawden (1996 argues, the need to account for labor input was instrumental in the rejection of tapia as a building material in favor of adobe bricks. Finally, as work by Burger (1995) and Dillehay (2004) demonstrates, monumental architecture does not have to be the product of a hierarchically organized group, but can also be produced by highly motivated communities under a variety of circumstances.

Duality as an Organizing Concept

While the following architectural interpretation is speculative, based upon an examination of architectural data from Jatanca, the Andean social organizational concept known as "duality" may have structured sociopolitical relations among Jatanca's constituents, especially as evidenced by the configuration of the features within the ramp/platform room (see below). Duality is an apparently ancient belief in the presence of opposing but complimentary forces that must be continually mediated so as to create a harmonious balance between the two (Bawden 1996; see also Moseley 2001; Netherly and Dillehay 1986). Netherly and Dillehay (1986) would further argue that social organization based upon principles of duality (and quadripartite divisions as well) is a "fundamental organizational principal of Pre-Columbian Andean Society" and that,

> "…the same mechanisms were used to organize space, to domesticate as it were vast expanses of the Andean landscape on the regional level, to organize groups within the context of a particular site, and to express relationships within the context of a particular archaeological complex" (1986:94).

Early examples of duality that antedate the construction and occupation of Jatanca can be found expressed in a variety of media such as stone, ceramics, textiles, and architecture. For example, early ceramics (and stone vessels), associated with the Cupisnique (1400B.C. - 600B.C.) of the North Coast (see Chapter 2) may reflect the presence of dualistic organizing principles among coastal societies as evidenced by the division of these vessels into nonsymmetrical halves that depict an anthropomorphic form on one side (typically the left side) and a non-human form (typically a feline, or arachnid figure) on the other (Burger 1995). According to Burger, “Such representations convey the sense of balance of opposites (natural: supernatural, human: animal) and the mystical potential of transformation” (1995:96). One example of this ceramic type likely came from the site of Puemape within the Jequetepeque Valley and depicts a feline figure on the right and an anthropomorphic figure on the left (Figure 8.1).

Figure 8.11 – Cupisnique Vessel

While difficult to interpret due in no small part to issues of preservation (see Burger 1995), early textile patterns may also provide evidence that indicates the antiquity of the concept of duality among North Coast cultures. Numerous examples of patterned textiles that depict elements such as two-headed snakes, interlocking figures (such as birds), and the creation of monsters out of two (or more) creatures have been excavated and may hint at the possible presence of duality during the Late Preceramic Period 2500bc - 1800bc (Burger 1995; see also Dillehay 2000; Stackelbeck 2008 for detailed chronology). The use of these duality-based figures have been interpreted as "symbols of popular belief" that continued in use along the North Coast region for subsequent millennia and may indicate the continuity of cultural and ideological ideas associated with at least some of the "Late Preceramic cosmogony" and associated myths (Burger 1995:35). It should, however, be pointed out that concepts of duality likely changed over time and was not a single monolithic organizational idea. Indeed, duality could have been embedded to varying cross-cutting degrees within social, political, ideological and artistic spheres.

Architecturally, duality could have been represented as far back as the Preceramic Period as evidenced by sites that have two large platforms, or pyramids as the polity's focal point such as Cementerio de Nanchoc, Rio Seco, La Galgada, and Kotosh (see Burger 1995; Grieder et al. 1988; Moseley 2001; Netherly and Dillehay 1986). For example, within the Zaña Valley, Netherly and Dillehay (1986) located a Late Preceramic architectural complex, (Cementerio de Nanchoc) which may have exhibited dualist organizing principles at a variety of levels including the site (the presence of paired mounds that differed in size) and in at least one example, the monumental structure itself (dual entrances). Later, more architecturally complex Zaña Valley sites such as San Luis also exhibited this same pattern of nested duality as noted by the presence of paired U-shaped mounds formed from a series of central platforms and attached parallel wings which created a central plaza entered by two sets of paired entries (Netherly and Dillehay 1986; see also below). Also of interest is that the southern mound is larger, "more elaborate" and has longer wings than its northern counterpart (Netherly and Dillehay 1986). This difference in size and elaboration is attributed to "an internal expression of ranked dual opposition" (Netherly and Dillehay 1986). Much later North Coast sites such as Sol/Luna provide additional "reasonable" examples of the underlying organizational principle of duality as exhibited in the presence of complimentary examples of monumental architecture (Moseley 2001).

Netherly and Dillehay (1986) argue convincingly that duality could be expressed at prehistoric sites at the level of the landscape as well. In this case, monumental architecture was located relative to the location of a dividing line, or "*chaupi*",[11] that was demarcated by the incorporation of natural and constructed linear features such as walls, rivers, dry river beds, and canals (active and abandoned). Ultimately, the *chaupi* demarcated opposing, yet unified groups (Netherly and Dillehay 1986). In some cases formal platforms were constructed along these divides that further reflecting the principle of nested dual or even quadripartite relationships (Netherly and Dillehay 1986). For example, in the Lurin Valley, Carlos Williams (1978) identified the presence of four large U-shaped temple complexes, dating to the first millennium BC (Netherly and Dillehay 1986). The river divided the four mounds into groups of two, with those upstream being larger and more elaborate than those downstream thereby demonstrating the presence of a hierarchical relationship among the broader quadripartite division (Netherly and Dillehay 1986). Based upon ethnographic, ethnohistoric and historic analogues, it is argued that the difference in size and architectural elaboration of monumental architecture can at times be due to the differential ability of leaders to draw upon varying amounts of human labor responsible for the construction of each mound (Netherly and Dillehay 1986).

Focusing now upon Jatanca, it could be argued that the presence of dualistic-based (and perhaps quadripartite-based – see below) concepts of moiety-like social organization that were developing during the Late Preceramic Period, may have continued to exist during the Late Formative Period and can still be recognized at many architecture-based levels within Jatanca. For example, within the Primary and Secondary PRPCs, the focal point of the complex was the elevated southern room within which are two opposed mirror image ramp/platform features of unequal area; one was located on the left, and one was located on the right of a viewer standing within the

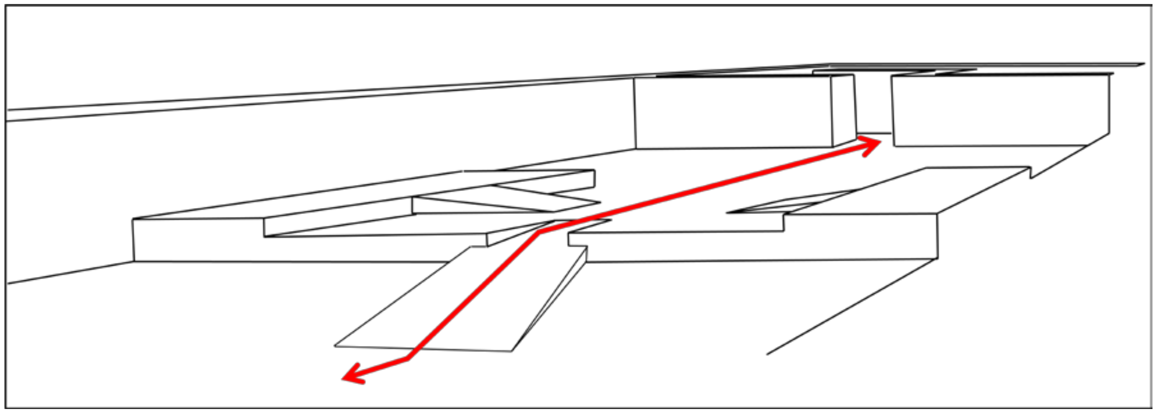
[11] "*Chaupi*" can be defined as a concept of intermediate space or status (Netherly and Dillehay 1986).

north plaza (Figure 8.2; see Chapter 6). It is tempting to see this spatial arrangement as an architectural representation or projection of social duality that served as a point within which highly visual, elaborate rituals and/or political performances (see Chapter 7) could have been enacted in an attempt to mediate and maintain the harmonic balance between opposing forces such as those associated with dyadic, or conjoined lineages, or other aspects of coastal Andean life organized in dual opposition (i.e. day/night, moon/sun, etc..). Indeed, each compound may physically represent the possible presence of a moiety-like internally divided collective social/labor unit somewhat similar to the much later *ayllu*, which incorporated a dual form of nested homologous social units made up of moieties and their respective sub-segments (Bawden1996; Isbell 1997). According to Bawden (1996:15) the *ayllu* could be further characterized as involving:

> "Mutual labor and ritual responsibilities between members of these social segments connect them in a network of reciprocal obligations that promotes group self-sufficiency and reinforces social solidarity. Dual organization is often reflected in a residential pattern in which settlements are divided into moiety-specific sectors. Fundamental to these practices is the belief that the health of the *ayllu* is achieved by the balancing of opposing but complimentary forces of both the natural and supernatural world."

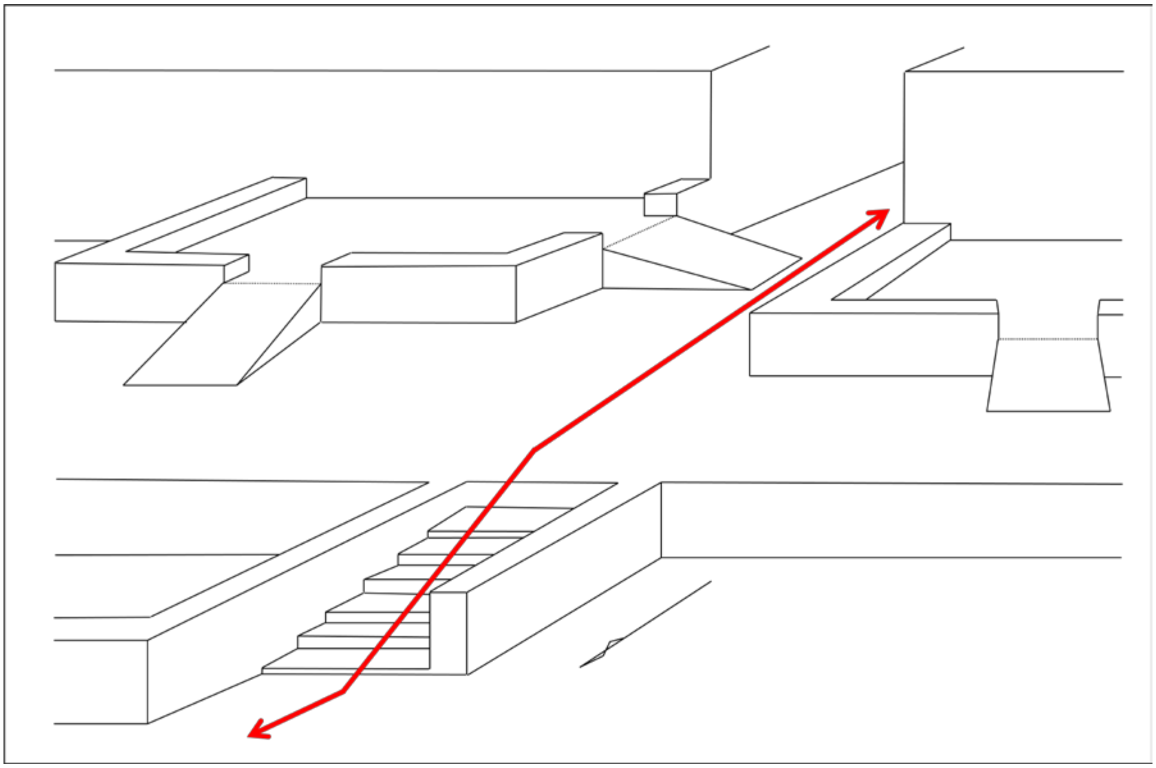
Again, while it is highly speculative, if the above ideas related to the moiety and *ayllu*, along with the associated concept of duality can be extended back into the Late Formative Period and each compound was representative of two opposed yet related ("complimentary") lineages, then perhaps the canals that run through Jatanca and separate the compounds could also be viewed as not just an effective means of bringing water to the polity, but also as both a symbolic and "real" divide (or *chaupi)* between moiety-like social structures that were attached to, and identified with a specific compound. Likewise, the canals that radiate across the Pampa Mojucape may designate group claims on agricultural land that were worked by a specific kinship-derived corporate group (see Netherly 1984).

Figure 8.2 – Dualistic Layout within the PRPC



Duality-based forms of moiety-like social organization may have been replicated, or "nested" at multiple social scales and architecturally represented within the site. For example, radiocarbon data indicate that the Acropolis was constructed around 500B.C. or approximately 200-300 years before Compounds I-IV (see Chapters 5 and 6). Radiocarbon data and ceramic data indicate that Compounds I-IV were all built and occupied at the same approximate point in time (Chapters 4, 5, and 6). In addition, ceramic and architectural data indicate that the Acropolis continued to be used right up until the point of abandonment, unlike Compound V, which appears to have been left to fall into a state of relative disrepair – perhaps around 200B.C. based upon the radiocarbon date acquired from the canal that runs through the south end of Zone 1 of the structure (see Chapters 4, 5, and 6). To sum: The Acropolis was built first, followed by the four major compounds, and all were occupied until the time of abandonment sometime no later than A.D.100. Given this chronology and the possible association of a moiety-like social structure, or lineage within each compound, there may also have been a dualistic form of sociopolitical organization that joined the contemporarily occupied compounds into binary sets made up of perhaps Compounds I and II, and Compounds III and IV. Taking this idea to its obvious conclusion, the two sets may also have been unified into some kind of an overarching form of sociopolitical organization that ordered much of the site along quadripartite lines of an extended network of kinship, both real and imagined (Netherly and Dillehay 1986). A duality-based, moiety-like social organizational system such as this might also help explain why architecturally Jatanca was organized primarily around four large, replicated free-standing compounds.

Figure 8.3 – Dualistic Layout along a Central Axis within the Acropolis's PRPC Variant



Of additional interest here is how the southern portion of the ramp/platform room of the Acropolis (Figure 8.3) differs from those associated with the major compounds (Figure 8.1). Despite the deviation from the replicated pattern found within the Primary and Secondary PRPCs, the internal configuration of the PRPC Variant also hints at the presence of the concept of ranked dual opposition. Netherly and Dillehay (1986) noted that among the key architectural features identified in defining ranked dual opposition at Preceramic Zaña Valley sites were the presence of two monumental structures that differed in size and elaboration, along with the presence of two opposed features such as entryways organized around a central axis. The features that make up the southern portion of the PRPC Variant within the Acropolis can be interpreted in a like manner. There are two large ramp/platform features that serve as the focus of the room. The one located to the east is slightly larger than its counterpart in the west. There are two ramps attached to the east ramp/platform feature which makes it somewhat more elaborate than its opposite, which has only one ramp leading to the summit of the platform. There are two ways to approach these two features; a central staircase or a western ramp (not pictured in Figure 8.2. see Figure 6.13). If one draws a line through the direct entry located to the south of the two ramp/platform features and extends it down the centrally-located stairway, a strong central axis is created that visually divides the two ramp/platform features.

The differences in feature configuration and the change in elevation associated with the southern sector may imply that activities (ritual, political, etc.…) enacted within this area were of a different form than those conducted within similar areas found within the major compounds (Moore 1996; see also Chapters 5 and 9). At the very least, the differential configuration of features would imply that movement associated with actors conducting ritual and/or political activities within these spaces would likely differ from those in the PRPCs. Ultimately, this might indicate that politico-ritual activity conducted within the Acropolis differed from those conducted within Compounds I-IV (see Inomata and Coben 2006; Moore 2005, 2006; Swenson 2004). While it is highly speculative, if the PRPCs and PRPC Variants were used at least periodically to provide a backdrop or stage for compound-specific duality-based social rituals, then perhaps the Acropolis – the oldest structure at the site – was used periodically for *site-wide* rituals involving all the complimentary lineages of all four compounds. The unique quality of these site-wide rituals might then explain the equally architecturally unique configuration of the plaza/ramp room within the PRPC Variant.

Finally, the Primary and Secondary PRPCs within the Acropolis and Compounds I-IV may symbolize an uneasy relationship between social segments, or what Bawden (1996) has called a "structural paradox" in power distribution inherent in pre-contact

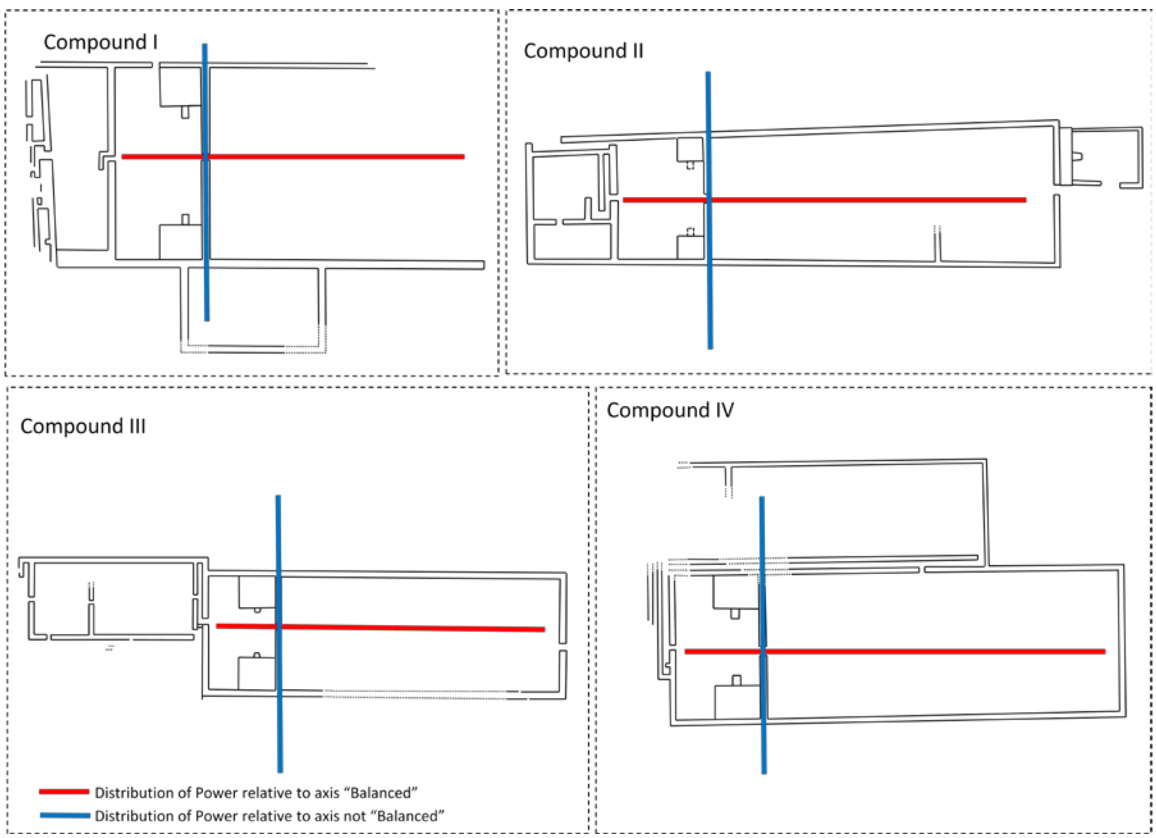
Andean politics, and exemplified by the Moche. According to Bawden (1996):

> "Andean social structure is loosely characterized by what have been termed 'kinship principles.' Inhabitants of the North Coast region shared with Andean peoples generally a holistic conception of the human universe in which such factors as affinity to a mythical founder of the community, ancestral reverence, and emphasis on community membership define status, strengthen social cohesion, and impede intergroup political integration. At the community level authority is exercised more through consensus than according to the decisions of a formal governing agency. Consequently, *elite power, by definition exclusive in nature, must be constructed within a context that innately resists it, creating a structural paradox between the wider social conception and the striving of leaders for individual power.* The greater this contradiction, the greater the potential for disruption should social stress imperil the ability of elites to maintain their position" (emphasis mine).

It could be argued that this structural paradox can be identified at Jatanca within the architecture of the compound as only a select few (Bawden's "elite") live within the compounds, while the rest live around the structure's perimeter within vernacular housing, creating an obvious sociopolitical divide as displayed in differential architectural access (see Chapter 6). Yet the fundamental, organizing principles of duality (Bawden's "kinship principles') are also still present as identified by the opposing ramp/platform structures within the PRPCs elevated room, and the ramp/platform features within the acropolis.

Indeed, the PRPCs spatially replicate Bawden's structural paradox and resulting social tensions identified by Bawden. If one views the PRPC along its north south axis both sides of the room are relatively equal in size, "balanced," and by extension of equal importance (Red line axis in Figure 8.4). However, if one divides the room along the line created by the retaining wall that elevates the ramp/platform room (Blue line in Figure 8.4) then the PRPC can no longer be viewed as a mirror image and the distribution of power relative to the axis is no longer "balanced." I argue that this architectural difference between the north/south sectors symbolizes and identifies the emerging unequal distribution of power at Jatanca, with the south representing the domain of those who inhabited the compound, and the plaza representing the domain of those who did not (see Chapters 3, 6, and 7). Therefore, the PRPCs are perhaps best-viewed as a purposefully structured space within which yet another aspect of duality, equality and inequality, could be acknowledged, mediated, and reified in ritual activity, thereby negating the supposedly inherent social tensions associated with Bawden's paradox. To sum: the PRPCs provided a structured environment within which differentially ranked segments of society could be simultaneously segregated and integrated.

Figure 8.4 – Dual Divisions of PRPC Interior



It is of interest to note that the incorporation of sunken circular courts into terrace and platform complexes at much earlier sites such as Salinas de Chao, Kuntur Wasi, and Cardal may represent earlier attempts at architecturally balancing emergent social hierarchies within a matrix of "egalitarian," kinship-based principles (Quilter 2001). In this case, the sunken circular courts may have been the loci of egalitarian-based social activities and rituals that were structured and conducted via lines of kinship (Quilter 2001). Additional ritual activities conducted on the solid terraced platforms, however, took on a different dynamic as this spatial arrangement reflected "… the basic notion that elevation confers status and segregates ordinary from extraordinary space" (Quilter 2001:23; see also Moseley 2001:118). In this scenario, while the sunken circular courts were phased out in favor of rectilinear patio/compounds, the underlying egalitarian ideals that were being actively redefined by the presence of emergent social hierarchies were not. Instead, they were architecturally reconfigured, re-thought, and re-represented in the form of the relatively equal east-west division created by the north-south axis. To sum, as Quilter has argued: "Late Preceramic and early Initial period building complexes thus seem to express somewhat contradictory principles: hierarchy and rank versus egalitarianism" (2001:23).

The importance of the structured environment within which ritual events could take place cannot be overstated (Moore 1996; Quilter 2001). In fact, Inomata and Coben (2006) argue that understanding the reflexive impact that the physical layout of space and architecture of ritual area has upon participants is just as important as understanding the form of the ritual events that transpired within as "…monuments provide stages for theatrical events, their physical presence creates ordered space that defines the social relations of participants" (Inomata and Coben 2006:17; see also Rapoport 1982). The structured environment of the PRPCs and smaller ritual venues such as the PDSP Complex were also important as places engendered with individual and social memories that could evoke past events, ideological messages and power relations (Inomata and Coben 2006; Schechner 1994).

Sociopolitical Organization: Jatanca and the Jequetepeque Valley

Examining Jatanca's position within the Jequetepeque Valley relative to other contemporary sites would provide key information related to inter-site interaction, the regional distribution and fluctuation of power, division of natural and man-made resources (irrigation) and/or perhaps relationships of trade and exchange. Unfortunately, based upon the results of previous surveys of the Jequetepeque Valley (Dillehay et al. 1998, 1999, 2000, 2009; Hecker and Hecker 1990), few additional sites that date in occupation to the Late Formative Period have been located. In addition, those that have been identified (Dillehay et al 2009; see also Chapter 3) do not have the same architectural or spatial design.

Obviously it cannot be stated with complete certainty that there were no other large, Late Formative Period sites within the Jequetepeque Valley that shared the same general architectural form and/or the same ceramic assemblage.[12] Dune activity, especially within the south valley, could have obscured additional contemporary examples – even of a large scale (Dillehay and Kolata 2004; Dillehay et al. 2004, 2009). In addition, destruction due to subsequent settlement and/or agricultural activity (pre-historic and recent) could have destroyed other examples of Late Formative Period, “Jatanca-like” architecture and/or ceramic scatters. Nonetheless, while these are all possibilities, at this point Jatanca is architecturally unique and represents the largest example of Late Formative Period architecture within the Jequetepeque Valley (Dillehay et al. 2009). The possibility that Je-1023’s uniqueness can be explained as the result of having served as either a regional pilgrimage center, or a ceremonial center must be briefly addressed.

It would be difficult to argue that Jatanca served any kind of a pilgrimage function (see Sallnow 1987) as did sites such as Pachacamac, (Shimada 1991; Uhle 1991), Cahuachi (Silverman 1993), and Chavín de Huántar (Burger 1995; Lumbreras 2007), all of which at least periodically drew short-term visitors from afar. Indeed, Jatanca’s obvious agricultural focus and almost complete lack of exotic, or foreign, artifacts makes this scenario highly unlikely (see Chapter 3). In fact, the abundant debris that surrounds the architectural core of the site is clearly domestic in nature, made up

[12] There are additional ceramic scatters within the Jequetepeque Valley that may be associated with Gallinazo populations (Dillehay et al. 2009; see also del Carpio 2009). However, architecturally speaking, there are no other contemporary sites the equivalent of Jatanca.

of typical Late Formative Period domestic ceramics and expedient lithic tools, and indicates that the presence of a relatively large, permanently settled, attendant population composed primarily of farmers organized along moiety-like lineages that were segmented and "attached" to specific compounds (see Chapter 3).

It would also be difficult to support the position that Jatanca served as a ceremonial center as originally defined by Willey (1953). Based upon patterns identified initially within the Virú Valley, Willey (1953) identified pilgrimage centers by the confluence of the following features:

1. Ceremonial centers were located within a relatively dispersed settlement pattern
2. The CC featured a large dominant platform
3. Additional examples of specialized architecture surrounded the dominant platform.
4. In general, the immediate population density of these sites was relatively low.

Clearly, in some respects, Jatanca conforms to Willey's (1953) definition; the site does appear to occupy a region that had little in the way of additional local settlement during the Late Formative Period (Dillehay et al. 2009; see also Chapter 3). However, unless one is prepared to argue that the Acropolis constitutes a "dominant platform" it seems that Jatanca lacks this key feature in Willey's definition. Furthermore, the Acropolis does not occupy the center of the site, but is located within the eastern portion of the core (see Chapter 6). However, since the Acropolis antedates the other major compounds (Compounds I-IV) by some 200-300 years, it is possible that the site originated as a coastal ceremonial center and that the later compounds with their attached PRPCs and PDSPs are representative of "additional examples of specialized architecture." Nonetheless, while deriving accurate population estimates from archaeological data is always difficult (Flannery 1976), it should be noted that the ceramic scatter that surrounds Jatanca is among the densest within the Jequetepeque Valley (Dillehay et al. 1998, 1999, 2000, 2009), indicating the likelihood of a fairly large permanent domestic population that clustered tightly to the monumental core (See Chapters 3 and 4) and argues against the application to Je-1023 of the ceremonial center moniker as defined by Willey (1953).

Based upon valley-wide and Pampa Mojucape-specific data (Hecker and Hecker 1990; Dillehay et al 2009; Warner 2006; see also Chapter 3), it seems most-likely that Jatanca was an independent polity that was primarily focused upon overseeing local irrigation agriculture and administering limited activity between itself and several other small-scale polities located throughout the Jequetepeque Valley within areas from which resources such as reeds (used in construction) and marine-based foodstuffs could be acquired – a situation that would fall within the category of the Norcosteño model of sociopolitical development and organization as espoused by Millaire (2009). To be sure, some inter-valley exchange took place (see below), but not on a scale that would indicate Jatanca was part of a complex, multi-valley system of formal sociopolitical relationships. These facts plus the general lack of "non-local" artifacts that might indicate Je-1023 functioned as a pilgrimage center, or an architecture configuration such as that associated with a ceremonial center (Willey 1953), would indicate that Jatanca was a relatively independent and perhaps even somewhat politically insular community.

Sociopolitical Organization: Jatanca and North Coast Regional Development

In general, political organization during the terminal Formative Period along the North Coast is not particularly well-understood – especially at the level of the inter-valley region. Recent work conducted within the Virú Valley at the Gallinazo Group has resulted in some much-needed data that has been used to formulate some interesting hypotheses regarding the development and sociopolitical organization of the site (Millaire 2009, 2010). Furthermore, these data and hypotheses can be examined in light of data from Jatanca so as to better-understand the development of sociopolitical organization along the North Coast of Peru.

Jean Francoise Millaire (2010) has recently excavated within both the residential and monumental sectors of the Gallinazo Group, which has resulted in the acquisition of several much-needed radiocarbon dates. In short, dates acquired by Millaire appear to demonstrate that the Gallinazo Group was occupied continuously from at least the 1st century BC through the 7th century AD. The presence of deep layers of fill (as much as three meters) below Millaire's earliest dates might further indicate that the Gallinazo Group was occupied even earlier – perhaps as early as the 2nd century BC.[13] It is also important to note that all of the units excavated by the team contained utilitarian domestic wares numerically "dominated by" types also found at Jatanca (see Chapter 4) such as Castillo Incised and Castillo Modeled, along with some examples of negative resist ware (Millaire 2010).

Early dates acquired by Millaire from the Gallinazo Group are significant with regard to North Coast development for a number of reasons (Millaire 2010). First of all, they demonstrate that the Gallinazo Group was occupied at an earlier period of time than has generally been thought (see Bennett 1950; Willey 1953). By pushing the occupation of the site back in time, Millaire (2009, 2010) argues that some of the ideas regarding statehood and the Gallinazo Group initially proposed by Heidi Fogel (1993; see also Chapters 2 and 4) are substantiated (but see also Donnan 2009). For example, Fogel (1993) contended that the Gallinazo group was the capital of an early coast-based, pristine state by at least the 2nd century BC., and among the earliest urban settlements along the north coast. Ultimately, both the valley-wide political organization and urban living conditions associated with the Gallinazo Group served as models for the emerging Moche state and were subsequently employed at Huacas del sol/Luna within the adjacent Moche Valley (Fogel 1993). Supporting these arguments, Millaire (2009) states that during the period of time between 200 BC and AD 800 the North Coast "…witnessed the emergence of urban life and functioning states along the littoral of northern Peru."

There is, evidently, at least one important difference between the two scholars in terms of how they view Gallinazo sociopolitical organization and inter-valley

[13] This would substantiate other early Virú valley dates acquired by Millaire at the site of Santa Clara and support models of valley-wide sociopolitical control by the Gallinazo as centered at the Gallinazo Group (Millaire 2010).

expansion. Fogel (1993) argued that the Gallinazo were the first expansionistic, state-organized culture to occupy multiple north coast valleys – a view not explicitly endorsed in entirety by Millaire, who does, nonetheless, agree with Fogel's contention that the Gallinazo were organized as a state centered within the Virú Valley, with the Gallinazo Group forming an urban center that was also the apex of political control (2009, 2010). As Millaire (2010) is careful to point out, much of Fogel's inter-valley occupation argument was based upon an underdeveloped absolute chronology at the Gallinazo Group and the problematic association of domestic wares such as Castillo Incised and Castillo Modeled with the Gallinazo – a situation that has been recently called into question (Donnan 2009; Millaire 2009; see also Chapter 4).

In addition to the issues with domestic ceramics, comparing the radiocarbon dates and architecture associated with the Gallinazo Group and Jatanca reveals numerous things of interest that can shed additional light on Fogel's and Millaire's model of Gallinazo sociopolitical organization and inter-valley expansion. According to radiocarbon dates acquired at Jatanca by both this project (see Chapter 5) and Dillehay and Kolata (2004), along with those from the Gallinazo Group published by Millaire (2010), initial architectural developments at Jatanca occurred long-before those at the Gallinazo Group.

Therefore, that the construction of Jatanca is the result of multi-valley Gallinazo expansion centered within the Virú Valley would seem to be chronologically impossible. However, given that the earliest dates from Jatanca come form the Acropolis – a structure that is somewhat different in form from Compounds I-IV (see Chapter 6), all of which appear to have been built at the same approximate point in time as the Gallinazo Group - it is possible that Jatanca may have had two occupational phases that are obscured by the lack of readily visible change among North Coast domestic wares (Attarian 2009; Donnan 2009; Millaire 2009). In this scenario, the first occupation - a local occupation that may have originated from populations from the coast at Puemape, and/or the Formative Period sites within the middle valley (see Dillehay et al. 2009 for locations; see also Chapter 3) - could have been "centered" around the Acropolis. The second occupation - which was responsible for the construction of the compounds - could have been associated with an expanding Gallinazo territorial state, as argued in Fogel's (1993) model. The fact that excavation within Jatanca demonstrated that there is little in the way of architectural antecedents beneath the areas that the compounds were constructed may further substantiate the idea that Jatanca was constructed quickly so as to provide a visible corporate presence, or administrative center, from which the Gallinazo Group could exert influence within the Jequetepeque Valley. Therefore, in addition to environmental factors discussed in Chapters 2 and 3 (see also Dillehay 2001; Dillehay and Kolata 2004; Dillehay et al 2004), the abandonment of Jatanca around AD100 could have also been the partial result of declining Gallinazo influence within the Jequetepeque Valley in the face of rising Moche hegemony along the North Coast.

However, when comparing the architecture at the two sites, it is clear that there are significant differences between Jatanca and the Gallinazo Group. For example, while the architecture at both sites is of a compound-style, the internal layout differs greatly between the two. At the Gallinazo Group, internal space has been portioned into numerous small rooms that are organized in an "organic" manner: it appears as though there is little in the way of formal organizational principles at play (Bennett 1950; Willey 1953). The opposite is true at Jatanca where compounds were replicated and subdivided into relatively large rooms, adhering to a general organizational pattern. The differences associated with the partitioning of internal space reflect an additional important difference between the sites: at Jatanca, the vast majority of the population lived around the exterior of the compounds within perishable structures made of *quincha,* whereas at the Gallinazo Group, the vast majority of the population lived within the compounds – hence the apparently "organic," informal, or even "expedient" appearance to the appropriation of internal space at the latter site (Bennett 1950; Willey 1953).

An additional significant difference between the sites concerns the construction of large huacas and the appropriation of space for sacred and secular activities. At the

Gallinazo group, a large huaca provided a point of visual focus within the site (Bennett 1950; Millaire 2010; Willey 1953). At Jatanca, unless one is prepared to argue that the decidedly non-monumental acropolis (Higuchi 1989; see also Chapter 9) fulfilled a similar function, then Jatanca lacked a similar aesthetic with regard to site organization. Instead, as with later Chimú sites such as Chan Chan (Day 1982) and Quebrada del Oso (Keatinge 1982), compound architecture provided the major visual focus of the site: there is no comparable huaca-like, multi-tiered, highly visible, corporately produced structure, such as those typically constructed by the Gallinazo or Moche, associated with Jatanca. Perhaps of greatest significance is the different manner in which space that could be used for secular and sacred group activities was apportioned at the two sites. At the Gallinazo Group, there was a single large plaza that could have been used to host polity-wide activities, while at Jatanca no such "unifying" space has been identified. Instead, space suitable for hosting "public" events is enclosed and attached to individual compounds, giving it a restricted appearance that emphasizes the individual compound as opposed to the site as a whole.

Based upon the differences in radiocarbon dates and architecture, it could be argued that if Gallinazo was an expansionistic, inter-valley state, it did not extend into the Jequetepeque Valley. If anything, cultural developments as measured by architecture and associated radiocarbon dates appear to have greater time depth within the Jequetepeque Valley than within the Virú Valley as Jatanca was evidently founded some 200 years before the Gallinazo Group. Indeed, it is not beyond the realm of possibility, and may in fact be likely, that with regard to Formative Period, North Coast ceramics, many of the surface treatment and form types identified by Bennett (1939, 1950), Collier (1955), Ford and Willey (1949), and Strong and Evans (1952) originated within the Jequetepeque Valley and spread to the south toward the Virú Valley where they were adopted by local populations. Certainly, the shared similarity in domestic ceramics and differences in radiocarbon dates would support this model.

Additional evidence that would tend to undermine Fogel's (1993) hypothesis can be found within the adjacent Chicama valley at the site of Mocollope (Attarian 2009).

Excavations at Mocollope have resulted in the recovery of Castillo Incised, Castillo Modeled, and Negative resist wares. Radiocarbon dates indicate that the site was occupied as early as 200BC. – again, earlier than the dates acquired by Millaire (2010) at the Gallinazo Group, but slightly later than those acquired from Jatanca by this project and Dillehay and Kolata (2004). Therefore, dates from Mocollope may further substantiate the hypothesis that domestic ceramics traditionally identified as Castillo Modeled and Castillo Incised originated outside of the Virú Valley, but were readily adopted by valley residents – especially during the occupation of the Gallinazo Group by the Gallinazo culture.

Along these same lines and just as intriguing is the degree to which Jatanca may have politically interacted with its neighbors, as material evidence of inter-valley, or extra-littoral zone interaction is somewhat mixed. Beads made from *spondylus* (a warm-water shell found off of the Ecuadorian coast) have been recovered from the bottom of postholes and indicate that Jatanca had at least some contact (direct or indirect) with polities outside of the Jequetepeque Valley (see Swenson et al. 2008, 2009, 2010). Yet, beyond this, there is little evidence that Jatanca established ties to sites within other far-closer regions. For example, no Huacaloma ceramics, which were produced in the nearby Cajamarca region of the Jequetepeque Valley, have been recovered within Je-1023. This is especially interesting when one consider that only a few hundred years later at the nearby site of Huaca Colorada, contact between the Pampa Mojucape and the Cajamarca region is obvious based upon the presence of numerous Cajamarca kaolin-based ceramics, along with perhaps even broader connections as evidenced by the abundance of raw copper at Huaca Colorada (Swenson et al. 2010).

To sum: it would appear the Fogel's model (1993) of inter-valley Gallinazo expansion does not explain the presence of Jatanca. In fact, radiocarbon dates indicate that architectural activity at Je-1023 began before that recorded at the Gallinazo Group. The lack of an architectural "fit" between the two sites would also substantiate the idea that the construction of Jatanca was the result of local sociopolitical and economic activity, and not based upon Virú Valley politics and architectural aesthetics (see Chapter 9). Indeed, Jatanca did not function as a regional administrative center for an expansionistic state located within the Virú Valley, but was instead a relatively autonomous locally administered center populated primarily by farmers who were exploiting the Pampa Mojucape via irrigation agriculture (see Dillehay et al. 2009). Site-specific differences in architecture, the presence of elite-wares that display idiosyncratic form and surface treatments styles, and the almost ubiquitous presence of domestic wares such as Castillo Incised and Castillo Modeled at Formative Period sites such as Jatanca, Mocollope, and The Gallinazo Group would tend to support the Norcosteño model of region-wide North Coast sociopolitical organization (Donnan 2009; Millaire 2009).

Conclusion

This chapter has attempted to identify the sociopolitical organization of Jatanca at telescoping levels of consideration such as site-specific, valley-wide, and the North Coast region primarily through an examination of the architecture, radiocarbon dates, and ceramic data. This intellectual exercise has resulted in the elucidation of a number of specific aspects of Jatanca's sociopolitical organization.

It has been argued (Moore 1996) that there existed a deep-seated North Coast ideological belief in the need to maintain status group divisions between at least some societal segments, and the highly-structured, replicated layout of Jatanca's compounds may reflect this belief. Access into the compounds appears to have been restricted by the use of a single entry in the north wall (see also Chapter 6). In addition, Compounds I-IV all have at least two nested ritual areas (see Chapter 7); the Primary PRPC is the largest of these areas and is the most-easily accessed, while access to additional, smaller ritual areas (Secondary PRPC, PRPC Variant, and PDSP) can be made only after first passing through the Primary PRPC. This spatial organization may imply the presence of at least two, and perhaps three, readily identifiable status group divisions within Jatanca.

In addition to the sheer size of the compounds and replication of design, construction techniques in the form of wall segments indicate the presence of organized labor. The degree to which that labor was organized in a "corporate" form as described by Moseley (1975) is, however, debatable. The lack of both identifying marks on the individual tapia wall segments, and partitioning within wall lengths does not support the presence of corporate organized labor as identified at Huaca del Sol (Bawden 1996). Instead, it could be better argued that work parties were communal based and organized perhaps along lines of kinship (Burger 1995).

Dualistic principles informing Andean sociopolitical organization and religious ideology also seem to have been at play at Jatanca as suggested by the presence of the opposing ramp/platform structures within the Primary and Secondary PRPCs. Along with more secular functions such as political activity, it was hypothesized that these features were used by social divisions of the same lineage group to stage elaborate rituals (see Chapter 7), the goals of which might have been to commune with deceased ancestors, or to mediate the oppositional forces that guided and structured their lives socially, spiritually, and ultimately spatially. It was also argued that Jatanca could have been organized along quadripartite lines as well (see Netherly 1990), with the constituents of each compound linked in binary opposition to those of a "sister" compound, such as a dyadic unit composed of Compound I and Compound II, and Compound III and Compound IV. Bearing this hypothesis in mind, the canals that run through the site and separate the compounds can also be viewed as symbolic divides, or *chaupi. Indeed,* the much-larger canals that divide the Pampa Mojucape may have designated specific plots of land assigned to each compound/lineage group. While highly speculative, it is perhaps the opposing platforms within the Primary PRPC of the Acropolis that provide the best evidence of a quadripartite form of social organization. Given its unique, elevated layout and antiquity when compared to Compounds I-IV, the Acropolis may have been used for ritual activities that necessitated site-wide participation between compound dyads (i.e. Compound I and Compound II form a unit, while Compound III and Compound IV form an oppositional unit). Since the eastern ramp/platform feature within the Acropolis is much larger than its western counterpart, it could be argued that the difference in platform size is related to the architectural expression of "an internal expression of ranked dual opposition" and the presence of a "superior authority" between dyadic groupings. Finally, separating these two platforms is an entry into the elevated portion of the Acropolis that could also symbolize an ideological divide between the two groups.

The design and layout of Jatanca's compounds represent and reify the social collective, or identity of the site; emergent differential access to power within a segmented system of largely kinship-based organization is represented physically at several levels such as the individual compounds, the PRPCs, and differential access to the nested locations of ritual activity. Indeed, it must be emphasized that the compounds were not just a silent repository within which the social organization of Jatanca was stored, but also actively shaped and reinforced social organization and behavior at the individual and group level (Inomata and Coben 2006; Rapoport 1982). Indeed, the free-standing, yet tightly-clustered organization of the site's monumental architecture may have reflexively broadcast the presence of a segmented and/or nested dependence/independence of Andean lineage-based social system. Differences in compound size may have also informed constituents of the ability of kin groups to draw upon greater human resources via superior authority among otherwise binary social groupings (see Netherly and Dillehay 1986). Restricted interior access not only preserved the privacy of those who lived within the interior of the compounds (Chapter 6), but also effectively demonstrated and reified one's social place; some were free to enter the compound's interior as they pleased, while others were not. In this sense, the monumental architecture of the site also informed residents of the rhythms of time as during certain periods of the calendar it was acceptable for certain social segments to enter the compounds for certain occasions, while at others it was not.

The PRPCs were perhaps the best example of how architecture was used as both a repository and informer of site-specific sociopolitical organization. This complex provided an area where the range of Jatanca's sociopolitical factions could come together for a variety of ritual and/or political purposes. The internal architecture reflected and informed each group of their status within the social hierarchy. For example, to start, just having access into the interior plaza identified one as an "insider" relative to those on the outside of the PRPC wall. Societal roles were further architecturally reflected and reinforced via differential access patterns during ritual as some would have had the option of emerging directly from behind the baffled entry in the south wall directly into the ramp/platform room, while others who entered through the north plaza entry probably did not enjoy the same freedom of movement. In a symbolic sense, the layout of the room reflects and reinforces the inner tension of emergent conscripted power within a kin-based form of social organization in several ways. Along the north-south axis, the room can be split into two relatively equal halves that ultimately make up a whole. The east-west divide along the retention wall that elevates the ramp platform room, however, architecturally accentuates differences in power in terms of restricted access, elevation differential, and the close proximity to ritual features traditionally associated with power; i.e. the ramp/platforms. There can be little doubt that the distribution of bodies throughout this space greatly reified the sociopolitical roles, hierarchies, and social collective of Jatanca's constituents. Indeed, as Catherine Bell (1992) would argue, it is the body in space that is the focal point of ritual and acts as a conduit that simultaneously receives and reifies a range of sociopolitical values. Therefore, the PRPCs (along with the PDSPs) were spaces within which the range of dynamic social relations could be reified, contested, and reshaped during ceremonial acts (see also Turner 1967).

The design and internal layout of Jatanca's compounds, however, were not created out of whole cloth, solely reflecting (and shaping) the sociopolitical organization of the site. In addition to contemporary sociopolitical forces, they were the product of past architectural forms that were perpetuated in part by a collective, or a shared social memory (see Chapter 9; Connerton 1989; Halbwachs 1992; Hobsbawm and Ranger 1983). The socially-based decisions behind the conscious or unconscious interpretation (or reinterpretation), revitalization, and subsequent incorporation of past monumental forms or entire complexes into the canons of contemporary architecture are complex and often reflexive of intentional acts of remembering and strategies of forgetting in the face of social upheaval. This topic is the focus of Chapter 9.

In terms of Jatanca's role with the Jequetepeque Valley, it would appear that the site was an important node of sociopolitical organization within (at the very least) the southern portion of the valley. Additional, smaller Formative Period sites (Dillehay et al. 2009) are located within areas that could have been of strategic importance in terms of resource acquisition to the largely farming population of Jatanca. Understanding the exact sociopolitical relationship between Je-1023 and these smaller surrounding sites requires further work (especially excavation and radiocarbon dating) and to date has not been determined.

Finally, examining architectural, radiocarbon, and ceramic data in light of models of inter-valley regional development during the Late Formative Period proposed by Fogel (1993) and others such as Millaire (2009) and Donnan (2009), it would appear that the construction of Jatanca was the result of local efforts, and not the product of an expanding, inter-valley hegemony, the origination of which was from within the Virú Valley. As might be predicted within the parameters of the Norcosteño model of sociopolitical development and organization (Millaire 2009), Jatanca occupied a territorial position that allowed it to take advantage of natural resources, in this case via the construction of irrigation canals within an irrigable portion of the Pampa Mojucape – an economic strategy adopted by many other contemporary "…polities of common cultural origin" located throughout the North Coast littoral during the Formative Period that also resulted in the development of diverse "regionally-specific building techniques" within a broader tradition (Millaire 2009:10).

Chapter Nine: Innovation and Persistence of North Coast Architectural Design: The Spatial Specificity of North Coast Social Memory

Introduction: Urban Architecture and Jatanca

As stated in Chapter 1, one of the many goals of this research was to examine the site of Jatanca (Je-1023) in order to improve our understanding of the development of urban architectural expressions on the North Coast of Peru and what they mean socially and culturally. Following widely employed archaeological signatures of urbanism that were conceived of by scholars such as Childe (1950), Rowe (1963), Schaedel (1966), Moseley (Moseley and Day 1982), Kolata (1997), Isbell (1977) among others and discussed at length in Chapter 2, the classification of Jatanca as an urban site seems specious at best. Typical urban criteria such as a relatively high baseline population figure (Rowe 1963 – see Chapter 3), economic specialization overseen by a bureaucracy (Child 1950, Schaedel 1966; Shimada 1994 – see Chapter 6), a predominantly centralized form of government (Childe 1950; Schaedel 1966; Shimada 1994 – see Chapter 8), and a secular form or governance (Schaedel 1966 – see Chapters 7 and 8) cannot be identified as having ever existed within the confines of Je-1023. It could be argued that Jatanca was, in many respects, a “typical” Formative Period agricultural community that was sociopolitically organized along complex lines of kinship that were reified at least in part by ritual activity that ranged between large-scale “public” events, and more intimate, small-scale affairs (see Chapters 6, 7, and 8). To sum: Je-1023 did not develop into an urban site, nor does it seem likely to have been the *immediate* precursor to later, more urban-like configurations within the Jequetepeque Valley such as Pacatnamú (Donnan and Cock 1986; 1997; Hecker and Hecker 1982) or Talambo (Keatinge and Conrad 1983). This is not, however, to say that Jatanca did not play a role in the development of North Coast urbanism.

Despite the fact that some 700 years[1] separate the final occupation of Jatanca and initial construction of Chimú sites such as Quebrada del Oso, Complex A-12 (Keatinge 1982), Pampa Mocan, and Chan Chan (see Chapter 5; Lockard 2009; Moseley and Day 1982), this chapter will argue that the architectural similarities shared between the compounds and PRPCs of Jatanca and the compounds and courtyards associated with later Chimú architecture may be at least the partial result of the purposeful manipulation of social memory[2] (Connerton 1989; Halbwachs 1992) and archaism (Patterson 2004) on the part of an emerging Chimú elite. In this scenario, long-abandoned Late Formative Period architecture served as an important influence on later Chimú constructions – perhaps even more-so than more temporally immediate architectural influences such as those associated with the preceding Moche culture. As a result, the history of North Coast urban architectural forms associated with monumental constructions as exemplified at Chan Chan cannot necessarily be understood as a steady, diffusion-like, progression of more or less direct, identifiable antecedents that imply growth in an accretion-like manner in response to concomitant increases in sociopolitical complexity (see below). For example, there are clear breaks between the use and abandonment of a number of canons of North Coast monumental architectural such as the adobe-constructed huaca (see below). One way to understand the rejection of this architectural form and the revitalization of the compound is through theory generated by social memory and how it is linked both specifically and obliquely with highly visible features such as monumental architecture (Bevan 2006; Inomata and Coben 2006; Tuan 1977; Rapoport 1982; Pearson and Richards 1994; Van Dyke 2009; Van Dyke and Alcock 2003; Yoffee 2007).

Briefly, social memories are those that are held, conveyed, and sustained by groups that can vary in any number of cross-cutting social categories such as size, political affiliation, economic status, gender, or ethnicity and can vary greatly in their composition from banal events shared among a few to sacred experiences that are

[1] According to Lockard (2009:298), "…the traditional date assigned to the emergence of Chan Chan" is A.D.900, but based upon ceramic data, may in fact be even earlier and date to the ninth century A.D.

[2] This chapter will use the terms "social memory" and collective memory" interchangeably.

“known” on some level throughout a given community (Connerton 1989; see also below for additional discussion).   Collective memories are by no means monolithic in their composition as the past and present experiences of the individual play a major role in their interpretation (Connerton 1989). Despite their multi-vocal quality, however, they can still be used and manipulated as an important means of establishing, maintaining, or usurping political power (Connerton 1989).

While there are many facets of life that are both consciously and unconsciously imbued with a sense of collective memory such as ritual (Connerton 1989), songs (Hobsbawm 1983), clothing (Connerton 1989), and bodily movements (Connerton 1989; Halbwachs 1992; Lefebvre 1991; Tuan 1974, 1977) monumental architecture also provides a powerful material link to social memory due to a number of potential factors such as its large size, prominent location, and apparent permanence, ultimately becoming a repository for the storage, manipulation, revitalization, and reinterpretation of social memory (Bevin 2006; Lefebvre 1991; Quilter 2001; Yoffee 2007). Indeed, according to Bevan (2006:12), one key in imbuing a sense of ideological production within monumental architecture is their apparent permanence and use as a shared space “within which different groups come together through shared experience; collective identities are forged and traditions invented.” In this sense, monumental architecture can be viewed as not only a large-scale building that perhaps symbolizes a polity, but as cultural artifact that provide tangible evidence of a past, legitimize the present and future, and assume a “totemic quality” (Bevan 2006). Combining the concept of social memory with architecture, Bevan (2006:15) succinctly defines the link between the two as:

> "…a bundle of individual memories that coalesce by means of exchanges between people and develop into a communal narrative about its architectural record. This is not a narrative independent of the generations of people who create and recreate the memories, but it is independent of any individual within that group. In part, we recognize our place in the world by an interaction with the built environment and remembering these experiences and by being informed of the experiences of others: the creation of social identity located in time and place."

It is within the realm of social memory and its link to monumental architecture[3] that this chapter will focus. Specifically, this chapter will examine the possible role played by social memory and human agents in the production of space and architecture within the Chimú site of Chan Chan. It should be made clear that within the framework of social memory that architectural changes associated with North Coast monumental architecture are not necessarily the result of simplistic, diffusion-based mechanisms (see Rogers 1983); i.e. precedents for architectural development can be located at slightly earlier, often nearby sites. Diffusion-based theory, although not necessarily expressed, has underpinned discussions related to Chan Chan's urban history for years resulting in the formulation of two similar, yet divergent models that purport to explain the architectural canons ultimately adopted by Chan Chan (McEwan 1990, 2005; Moseley and Day 1982; Moseley and Cordy-Collins 1990). Both models assume that the primary "influence" in the architectural configuration of Chan Chan can be found at immediate antecedent sites; either at Galindo (Moseley and Day 1982) or highland sites such as Pikillacta or Viracochapampa (McEwan 1990, 2005). I will argue, however, that large temporal gaps lasting hundreds of years can divide architectural traditions and that the primary stylistic antecedent to Chan Chan is not found within neighboring sites that

[3] It should be pointed out that social memories can also become attached to vernacular architecture as well (Bevan 2006). However, given the current lack of specific data related to household form within Je-1023, this aspect of social memory and architecture will not be examined within this chapter.

were occupied immediate to the foundation of the Chimor capital, but within even earlier Formative Period compound-based centers distributed throughout the North Coast landscape. In this case, the agent of architectural adaptation or change is not the result of a simple progression of events closely linked in time and space, but are instead viewed as profoundly impacted by a range of conscious, politically motivated or perhaps religiously inspired decisions to embrace or reject the past, both immediate and distant, as mediated through contestations within, and the active manipulation of social memory. The choices made by Chan Chan's architects likely also reflect the continuation and intensification of social divisions and political segmentation also identified at Je-1023. In Chapter 8 it was argued that restricted compound access, bilaterally organized architectural elements, replicated within four free-standing compounds indicated the possible presence of social sequencing, moiety-based duality in social organization, and segmented political control at Jatanca. The general similarity between Jatanca and Chan Chan may indicate the continuance and intensification of these general trends.

Demonstrating the above contentions will require a detailed examination of North Coast culture history, spatial/architectural data, and how social memory can be employed as a political tool. First, this chapter examines the traditional arguments that purport to explain the development of North Coast monumental architecture culminating with Chan Chan's urban core. In addition to Chan Chan, this will entail examining a number of antecedent sites such as Galindo, Pikillacta, and Jatanca. Next, a detailed discussion of collective memory and its relationship to monumental architecture is presented with the focus placed upon the purposeful manipulation of social memory via acts of remembering and strategies of forgetting as encoded in interior design, form, function, and symbolism of monumental architecture (Bevan 2006). This chapter will demonstrate that the purposeful manipulation of social memory has resulted in a pattern of "punctuated" architectural developments as opposed to one of steady or "cline-like" progression. While the focus of this chapter is upon Chan Chan, it should be remembered that the impact of agency in the manipulation of social memory extends far beyond the built environment of the Chimor capital and into the hinterland as well, where other regional administrative centers such as Pampa Mocan and Quebrada del Oso were also constructed in a manner reminiscent of Jatanca.

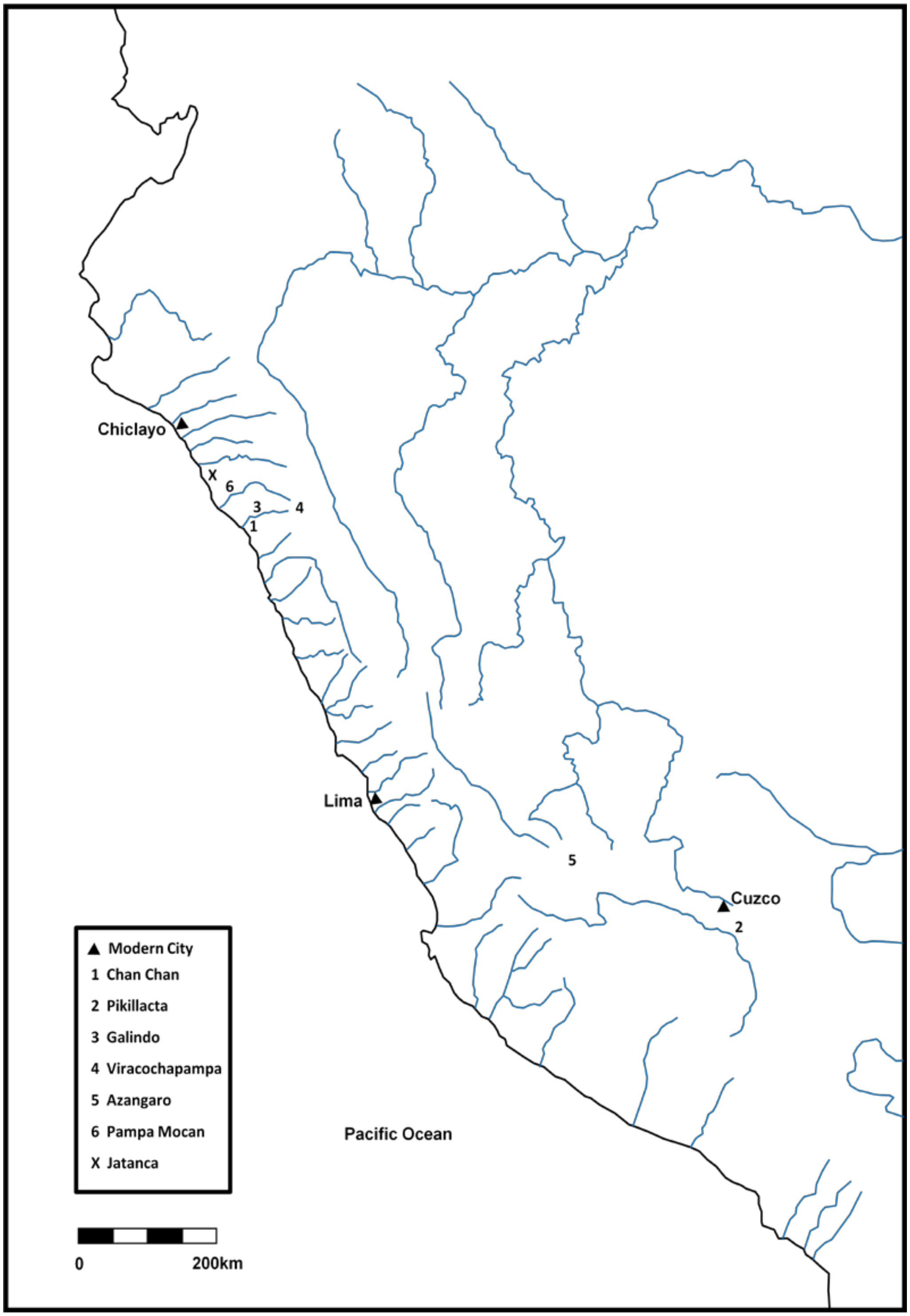
North Coast Urban Expression: Pan-Coastal Process or Highland Influence

If Preindustrial urbanism can be defined by criteria such as scale, density, and social heterogeneity (Childe 1950; Rowe 1963; Wirth 1938), then the Chimú capital of Chan Chan with its monumental architecture, concentrated population, and condensed extremes in social status is perhaps the preeminent example from the north coast of Peru. The architectural core of this Moche Valley site covers approximately 6 square kilometers, and is made up of 10 large compounds, or *ciudadelas*, 35 elite compounds, canals, workshops, agricultural fields and the remains of perishable structures. The site is also characterized by the presence of a substantial non-elite support population numbering between 20,000 and 40,000 inhabitants (Moseley and Day 1982; Moseley and Cordy Collins 1990).

Chan Chan's urban status is beyond dispute. Nevertheless, the complex processes responsible for Chimú urbanization are still poorly understood and this issue continues to be debated by North Coast archaeologists (McEwan 1990, 2005; Moseley 1990; Moseley and Day 1982). Put simply, Chan Chan's urban genesis and architectural expression has been interpreted as either an "internal" (North Coast) development, or as the product of "external imposition. According to Mackey (1982) the beginning of this particular debate can be traced back to Kroeber (1930) who during a brief visit to the North Coast made three key observations: all of the large sites he visited dated to no earlier than the Middle Horizon; there was a break in the continuity of North Coast post-Moche ceramics; and that this break was due to an "invasion" from the sierra. These observations, taken somewhat out of context, were used to argue that urbanism was the direct result of a Wari invasion (Mackey 1982; see also Schaedel 1966). Willey (1953), working in the Viru Valley, noted that the end of the Moche culture coincided with the rapid appearance of non-local ceramics and rectilinear architectural forms. Willey found the new architectural style to be compelling evidence of non-local influence. Since the new rectilinear form was not found in association with huaca-style architecture, Willey (1953) also argued that it represented a more secular form of social organization, ushering in the development of true North Coast cities.[4]

[4] A position largely seconded by Schaedel (1966, 1972, 1985).

Figure 9.1 – Map of Major Sites Mentioned in Chapter



However, as a blanket means of explaining North Coast urban development, Willey's scheme falls short as demonstrated by evidence from other valleys that show no signs of a Wari component (see Mackey 1982). As Shimada (1994) points out, the Lambayeque Valley shows no indication of a Wari conquest. The same can be said for the lower Jequetepeque Valley, where unequivocal examples of Wari imperial architecture and ceramics are not found (Dillehay et al 1998, 1999, 2000, 2010; but see also Castillo 2001). Shimada also expresses concern that Willey's model lacks chronological precision, and "subsumes a series of major events and processes within a single phase . . . that probably spanned upwards of 300-400 years" (1994:10).

The Chan Chan-Moche Valley project (Moseley and Day 1982; see also Donnan and Mackey 1978; Moseley and Mackey 1974) directly challenged the developmental hypotheses of the Viru Valley Project and attempted instead to explain North Coast urbanism as having been primarily an internal process. In this scenario, the urban development of Chan Chan was explained as primarily the result of local Moche Valley cultural continuity that stretched back to the Early Intermediate Period (Moseley and Day 1982). For example, multi-use, compound architecture, such as the Platform A Complex, identified at the Moche V site of Galindo within the upper-lower Moche valley was considered to be a direct architectural precursor to the early *ciudadelas* of Chan Chan (Bawden 1982). Furthermore, the pronounced socio-spatial division of resident communities based on differences in status marked an additional point of structural convergence between these two exemplary cities. Therefore, given the spatial and temporal proximity of the two sites, many argue that Galindo served as the primary local antecedent for the architectural expression of urban organization at Chan Chan – especially with regard to monumental architecture such as the ciudadelas (Bawden 1996, 2001; Moseley and Day 1982; see also Moseley and Cordy-Collins 1990).

Nonetheless, some important architectural features used eventually at Chan Chan may have been developed in other valleys. Indeed, Keatinge (1975, 1982) argued that the *audiencia*[5] may have originated within the Jequetepeque Valley at the site of Pacatnamú and was perhaps later incorporated into Chimú *ciudadela* architecture (1982). According to Keatinge (1975, 1982), the function of these structures changed however, from one of a religious nature at Pacatnamú as evidenced by their close proximity, and direct incorporation into *huacas*, to one of a more secular, administrative function at Chan Chan as indicated by the strategic location of *audiencias* along points of access and in close proximity to storage bins (but see also Moore 1996). Keatinge argued that this functional change in U-shaped architectural features possibly indicates a "transition from theocratically oriented regional states to a single, large north coast empire characterized by a well-established managerial bureaucracy."

Despite Keatinge's contention that the *audiencia* may have developed external to the Moche Valley, in general, the Chan Chan-Moche Valley project argued that the urban development at Chan Chan was largely the result of endogamous forces and that cultural dynamics were more the result of the vagaries of the local environment, than contact with the Wari (see Shimada 1994). Indeed, Mackey argued that there had never been much of a Wari presence within the Moche Valley and that there was no appreciable hiatus between the Moche collapse at Galindo and the establishment of Chan Chan (1982; see also Lockard 2009).

Nevertheless, McEwan (1990) has argued that Chan Chan's urban form was heavily influenced by antecedent Huari compound architecture and that the ciudadelas at Chan Chan represent a "conscious imitation of a model presented by the Wari imperial styles" (1990:98). McEwan supported this argument through the identification of eight points of shared architectural style found at both Pikillacta (Figure 9.2) and Chan Chan's *Ciudadela* Rivero (Figure 9.3). McEwan argued that these characteristics are, "highly specific and reflect similar concepts involved in the design and construction

[5] Day (1982) encountered possible *audiencia* precursors at the Late Moche site of Pampa Grande, located in the Lambayeque Valley. According to Day, these structures were found on top of pyramids and (somewhat contra the situation at Pacatnamú as defined by Keatinge (1975, 1982) may have had a significant economic function as they were strategically placed at locations that could oversee the control of goods.

of the architectural monuments." McEwan's list is as follows (1990:107-108; see also 2005):

Figure 9.2 - Plan of Pikillacta – Scanned from McEwan 2005

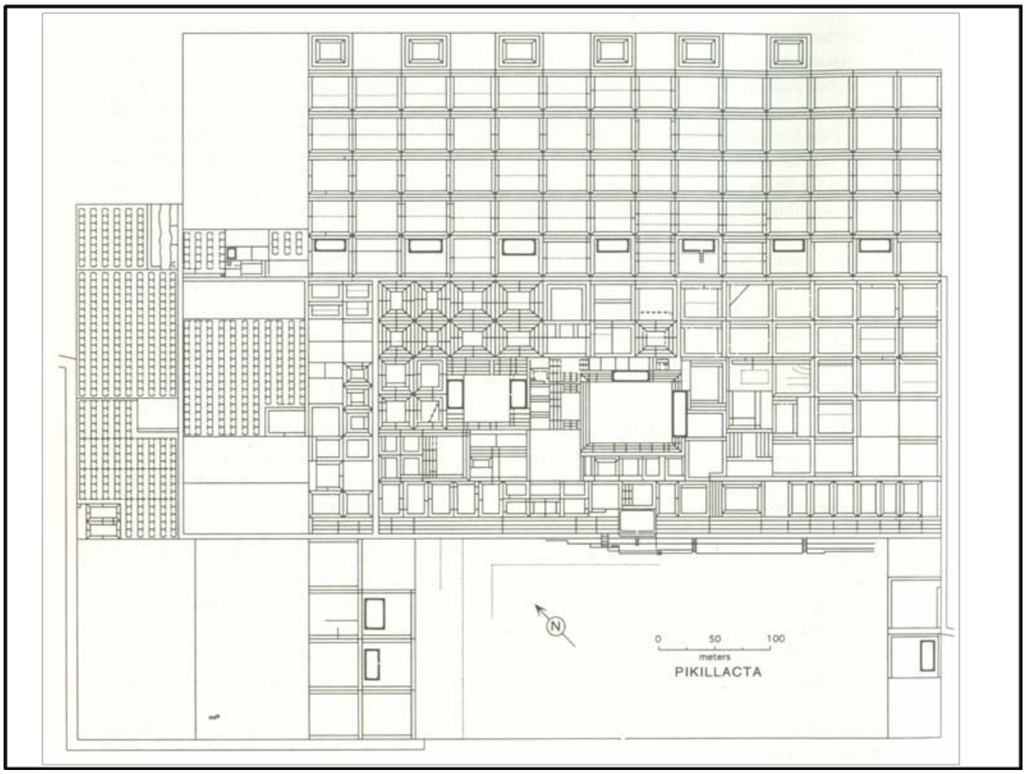
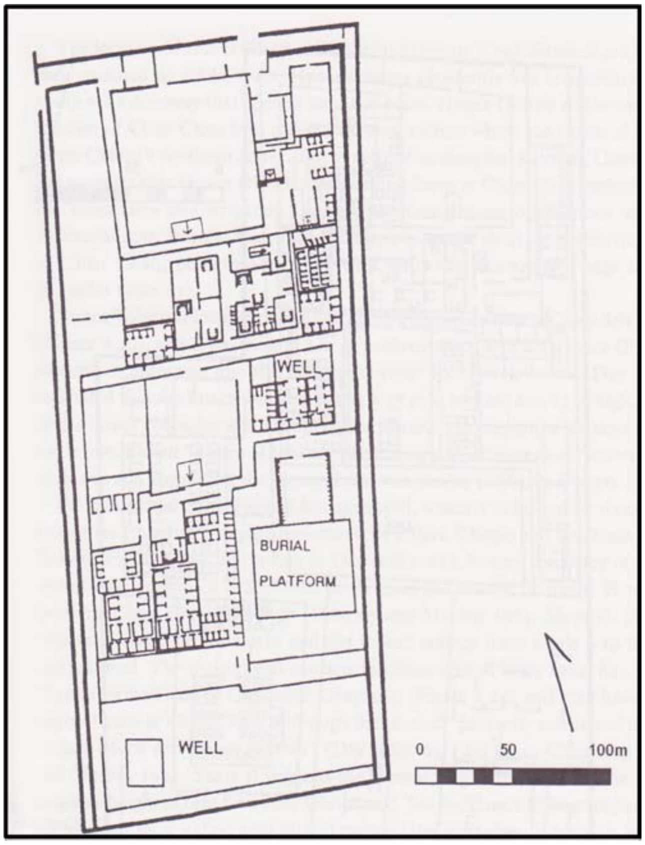


Figure 9.3 – Plan of Ciudadela Rivero – Scanned from Moore 1996



1. Both sites share a basic structural concept of utilizing large, high-walled, rectangular enclosures.

2. Both sites are aligned in a north-south orientation slightly east of north.

3. Both sites have an overall tripartite division of internal space. The density of rooms and prestigious structures" are found in the center, while the southern sector tends to be empty.

4. Both sites used annexes to enlarge compounds instead of enlarging the original enclosure.

5. Both sites have long, tortuous entryways that reflect strict control over compound access.

6. Both sites have small conjoined rooms

7. Walls at both sites are sectionally constructed (horizontal and vertical) that

may indicate the presence of corporate labor activity.

8. Both sites use enclosing double walls that surround large portions of the compounds' perimeter for the purpose of controlling access.

While some of the above comparative categories appear on face value to be valid, there are many problems with McEwan's list. For example, with regard to point #1, McEwan is forced to deemphasize the shared rectilinear shape of both Pikillacta and the *ciudadelas* since, "The rectangular enclosure is an obvious architectural solution that sooner or later occurs to everyone constructing buildings" (McEwan 1990:107). Therefore, what sets Pikillacta and Chan Chan apart from other walled compounds is not their rectilinear form, but the *scale* of the project, as both sites have walls that still stand close to ten-meters in height. But McEwan leaves unresolved the point at which walls are no longer just "an obvious architectural solution," but are instead better-viewed as a social statement made through the relative scale of a feature. McEwan's criteria are also problematic with regard to the degree to which both Pikillacta and *ciudadela* Rivero are aligned in a north-south direction (Point #2). While it is obvious that Ciudadela Rivero is oriented just east of north, the orientation of Pikillacta is some 60 degrees east of north (see McEwan 2005). The Wari imperial site of Azangaro (Anders 1991), is oriented approximately 45 degrees *west* of north. Only the Wari site of Viracochapampa, located within the highland Moche valley, is oriented along a north-south axis (J. Topic 1991). This general lack of imperial architectural orientation along a north-south axis forces McEwan (1990:108) to state that, "precise north-south alignment was not considered necessary and slight derivations were tolerated." If that is the case, then one must ask why this particular criterion was included in the first place. Point of comparison #6 argues for the presence of intercultural influence based upon the mutual presence of concentrations of small conjoined rooms. However, as McEwan points out, these rooms were evidently used in very different ways, with those at Pikillacta used for habitation, and those at Chan Chan used for storage. There is also additional information with regard to point #7. At Pikillacta, wall intersections were interdigitated, whereas at Chan Chan adjoining brick columns were never interdigitated, but only abutted (see Mackey 1982). Finally, with regard to point #8, only Pikillacta and Ciudadela Rivero use this form of architecture. None of the other Wari sites or the remaining nine ciudadelas uses this architectural feature as a means of control over compound access.

Even if one allows that there is an excellent fit between Wari imperial architecture (as exemplified at Pikillacta) and the ciudadelas at Chan Chan (especially with regard to Rivero), the architectural similarities between Chan Chan (along with hinterland sites such as Quebrada del Oso and Pampa Mocan) and Jatanca must still be taken into account and explained – especially since Jatanca was abandoned some 400 years before the existence of the Wari and 800 years prior to the development of the *ciudadelas* or smaller, less complex Chimú compounds such as those found throughout the North Coast. In fact, the settlement pattern and architectural features from Jatanca demonstrate conclusively that the urban architectural expression embodied in Chan Chan was the result of a long-term, pan-North Coast process of architectural utilization, modification, and revitalization.

Jatanca and Chan Chan: an Architectural Comparison

It has been argued that the architectural development of Chan Chan is not the result of highland “influence” from the Wari of the Middle Horizon, but is instead the culmination of a long-term North Coast process that transcends diffusion-based explanations of architectural development. The manipulation of social memory and history for political gain via the acceptance and/or rejection of monumental architectural forms is one way to explain the similarity between the architecture found at Jatanca and Chan Chan – despite the fact that some 700 years intervened between the abandonment of Jatanca and the founding of Chan Chan (see Lockard 2009). In order to demonstrate this possibility, a number of steps must be taken. First, this section will examine the architectural similarities between Jatanca and Chan Chan using only McEwan’s criteria. Then, additional architectural features that are shared by both sites will be identified. The purpose of this comparison is to demonstrate the antiquity of many of the architectural features that were revitalized and used by the architects of Chan Chan, and demonstrate their presence long before the beginning of the Middle Horizon, thereby negating McEwan's argument that they were introduced by a highland source.

In turning back to McEwan's criteria (1990), many of the architectural similarities identified as being shared by Pikillacta and Chan Chan, are also shared by Jatanca and Chan Chan. With regard to **point #1**, both sites share the use of large, high-walled rectilinear enclosures as a basic structural concept. While it is true that the tapia perimeters that define Jatanca's compounds are not as "monumental" as the massive walls of Chan Chan and Pikillacta, they are still impressively tall, easily exceeding three-meters in many locations. With regard to **point #2**, directional orientation, all of Jatanca's compounds are oriented just a few degrees east of north – an orientation that is practically duplicated at Chan Chan[6] (see also Williams 1985). **Point #3**, the internal tripartite division has not been identified at Jatanca, where it appears as though there was a greater concern with dual organization. However, Compounds I, II, and IV all have western annexes that could have been added at a later date to increase the size of the original, linear-shaped compound as stipulated in **point #4** (see Chapter 6). As far as **point #5** is concerned, unlike Pikillacta and Chan Chan, access into the compounds of Jatanca is relatively direct, although Compounds II and III do have ramp/platform features on the exterior side of the entrance, which may indicate that there were at least some restrictions placed upon entry. Once inside, though, access deep within the compounds is indirect as one must move through a series of baffled entries, hallways, and other rooms in order to reach the southernmost rooms. One feature that is definitely not found at Jatanca is the presence of small conjoined rooms, **point #6**, as are clearly found within Chan Chan. However, the walls at Jatanca are also made using segments that likely indicate the presence of some form of community-based labor

[6] *Ciudadela Uhle* is a bit of an enigma with regard to its orientation as based upon zone identification, it is oriented along an east-west axis. However, based upon the location of the compound entry and the location of the main and (hypothesized) secondary plaza, the structure assumes an axis just east of north.

(**point #7**) (see Chapter 8). **Point #8**, the presence of enclosing double walls that surround the compounds and control interior access are not found within Jatanca.

To sum, it can be argued that the following four architectural features forms used by McEwan to demonstrate the influence of Wari imperial architecture at Chan Chan are also found during the Late Formative Period at the decidedly non-urban Jatanca:

1. Basic structural concept of using large, high-walled, free-standing rectangular enclosures
2. Alignment of monumental architecture is just east of north
3. The use of annexes
4. Sectional construction techniques

In light of the above points of comparison, two of them, points #2 and #5 are far more similar when compared between Jatanca and Chan Chan, than when compared between Chan Chan and Pikillacta. With regard to the architectural dissimilarities between Jatanca and Chan Chan, it needs to be emphasized that with regard to McEwan's point #8, there is only one example of an enclosing double-walled feature at Chan Chan, just as there is only one example of this architectural feature found among the Wari sites analyzed by McEwan (1990).

Perhaps of greater importance is that additional architectural similarities, beyond those stipulated by McEwan, can also be identified as being shared by both Jatanca and Chan Chan. They are as follows:

1. Settlement pattern

Both sites have the same general settlement pattern: a cluster of large, free-standing rectangular compounds surrounded by the majority of the constituent population within an open, relatively unprotected landscape. Certainly, there are differences as well, given the presence of elite compounds and workshops at Chan

Chan, which are absent at Jatanca. Nevertheless, the general layout of the two sites is strikingly convergent.

2. Compound entry location

Entry into the compounds and the *ciudadelas* is almost always made from the north through a centrally-located doorway. Compound I and *Ciudadela Rivero* can also be entered from the west. In both cases, however, the west entry does not permit direct access into the core of the structure. Building access at both sites, then, is highly restricted.

3. Location of first plaza

The largest plaza is closest to the northern entry at both sites. At Jatanca, this pattern is a universal feature of all of the principal complexes. At Chan Chan, *ciudadelas, Uhle, Tello, Laberinto, Gran Chimú, Velarde, Bandelier, Rivero, and Tschudi* all conform to this pattern. The preservation of *Ciudadela Chayhuac* is poor, making it impossible to know for certain if it conforms to the prototype. It is also impossible to identify this form of organization in *Ciudadela Squier* as it was evidently never finished and also suffers from quite a bit of post-abandonment destruction (Day 1982). However, an examination of the plans (Moseley and Mackey 1974) indicates that it might have conformed to the general pattern.

4. Interior form of the first plaza

At both sites the interior of the first (northernmost) plaza is the same. There is a single entry in the center of the north door that leads directly into the plaza. With the exception of *Ciudadela Uhle*, The focal point of the plaza is located in the south and is composed of at least one ramp/platform feature, behind which is located at least one other entry that permits further access into the structure. While not all of these doors at Chan Chan are baffled, they are generally located within an area that would have made it difficult for someone in the plaza to see much beyond the entry. The presence of these room complexes implies that ritual was an important activity that occurred within similar structures at both sites.

5. Nested pattern of plazas

Compounds I-IV at Jatanca have a nested pattern of plazas with the largest plaza (Primary Plaza) closest to the compound entry, and the smaller plaza (Secondary Plaza) accessed in a linear manner through the first. This same pattern of nested plaza access is repeated among *Ciudadelas Tello, Laberinto, Velarde, Bandelier, Rivero, and Tschudi* (see Moseley and Mackey 1974). It cannot be stated for certain whether or not Ciudadelas Uhle, Gran Chimú, or Squire conformed to this pattern due to post-abandonment destruction (Moseley and Day 1982). As at Jatanca, the size of the Secondary Plaza is smaller than that of the first and oriented in the same direction as the Primary Plaza – especially in Compounds III and IV.

6. Interior form of the second plaza

Within Compounds III and IV, the interior organization of the Secondary Plaza is the same as that of the Primary Plaza. There is a central door in the north wall, the focal point of the plaza is the ramp/platform room in the south, and there is a centrally-located baffled entry that permits direct access into the ramp/platform room. This interior replication of the Primary Plaza within the Secondary Plaza is also found within *Ciudadelas Tello, Laberinto, Velarde, Bandelier, Rivero, and Tschudi* (see Moseley and Mackey 1974). This pattern may have also occurred within *Ciudadela Uhle*, but as for *Ciudadelas Gran Chimú* and *Squire*, it is impossible to determine based upon current maps (Moseley and Mackey 1974).

Combining the above two lists, it could be said that in general Jatanca and Chan Chan share the following spatial and architectural features:

1. Basic structural concept of using large, high-walled rectangular enclosures
2. Alignment of site just east of north
3. The use of annexes
4. Sectional construction techniques
5. General layout of settlement
6. Location of compound entry
7. Location of the Primary Plaza
8. Interior form of both Primary and Secondary Plazas
9. Nested pattern of plaza access
10. Consistent replication of space and architecture among compounds

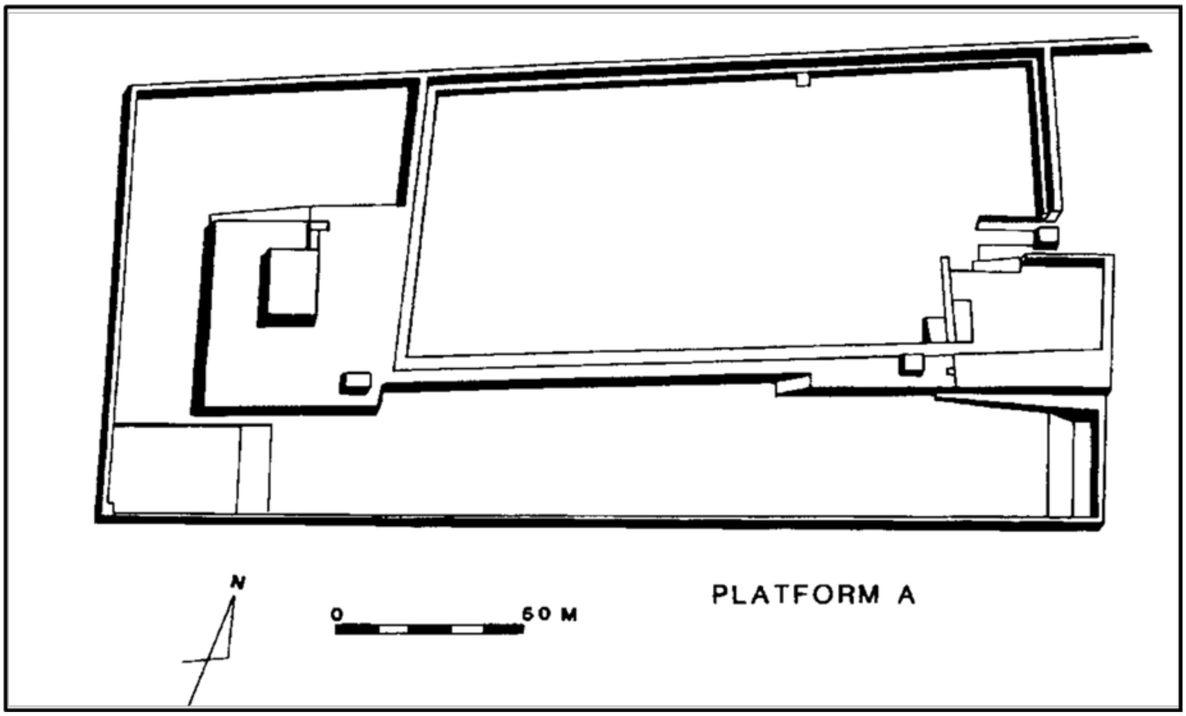
To be sure, there are architectural divergences between Jatanca and Chan Chan as well. For example, in terms of the form and internal organization of space, the ciudadelas at Chan Chan generally exhibit a tripartite division of space, whereas Jatanca does not. In addition, in terms of function, the ciudadelas appear to have been used for multiple activities associated with mortuary, storage, and domestic occupation based upon the identification of numerous constructed, or "formal," features such as storage bins and mortuary mounds within interior rooms. Similar constructed features are lacking at Jatanca (see Chapter 6 and 7). However, even when these are taken into account, it could be argued that the architectural and spatial similarities between Jatanca and Chan Chan are greater than those between Chan Chan and Pikillacta.

Given that Jatanca was occupied during the Late Formative Period (see Chapter 5), the above list would indicate that if the Wari influenced the form of the *ciudadela*, it was relatively minor. Therefore, it could be argued that the Jatanca data demonstrate that the architectural expression of urbanism as measured by the use and form of the *ciudadela* was largely an endogamous process as stated initially by the Chan Chan-Moche Valley Project (Moseley and Day 1982). However, the data from Jatanca also argue that the process behind the development of urban architectural expressions was far more complex than that proposed by many of the project members who in a somewhat diffusionist manner regarded Galindo as being the direct architectural precursor to subsequent developments at Chan Chan (Bawden 1982, 2001; Conrad 1974; Topic and Moseley 1983). In this model, Galindo was abandoned and its constituents relocated more or less immediately (along with those at Sol/Luna) to the coast and began construction on Chan Chan (Lockard 2009). However, when comparing the architecture at Galindo with Chan Chan, it is apparent that despite being removed in time and space, Jatanca is far more similar to Chan Chan in many respects than is the neighboring Galindo. A brief comparison between Galindo and Chan Chan should demonstrate this fact.

According to Bawden (1982), there are two classes of formal architecture at Galindo that could have served as antecedents to c*iudadelas*; the Platform A Complex (Figure 9.4; see also Conrad 1974), and the *cercadura* (see also Bawden 2001), both of which are described in detail in Chapter 2. Yet by comparing both Moche V architectural forms to the *ciudadelas* of Chan Chan, it is clear that the theme of linear, valley-specific architectural precedent and development is a bit stretched.

First of all, the orientation of large-scale architecture at Galindo and Chan Chan differ greatly, as Galindo seems to lack any kind of a master axis as structures often follow the natural contours of the valley topography (Bawden 1982, 1996, 2001). When examining the specific architectural forms, the Platform A Complex does not utilize a tripartite division of space, nor were annexes constructed in order to increase the building's capacity. The entry into the Platform A Complex is not in the north, nor is it in the center of the wall, although it does provide immediate access into a large plaza. However, unlike Chan Chan and Jatanca, there is no ramp/platform structure opposite the entry that serves as the room's focal point. The linear, nested pattern of plazas that decrease in size is also absent from the Platform A Complex. The Platform A Complex houses a small huaca. While there are some huacas at Chan Chan, they tend to be are spatially marginalized near the periphery of the site, and segregated architecturally by walls (Moore 1996; see below). Finally, the structure is oriented east-west as opposed to north-south.

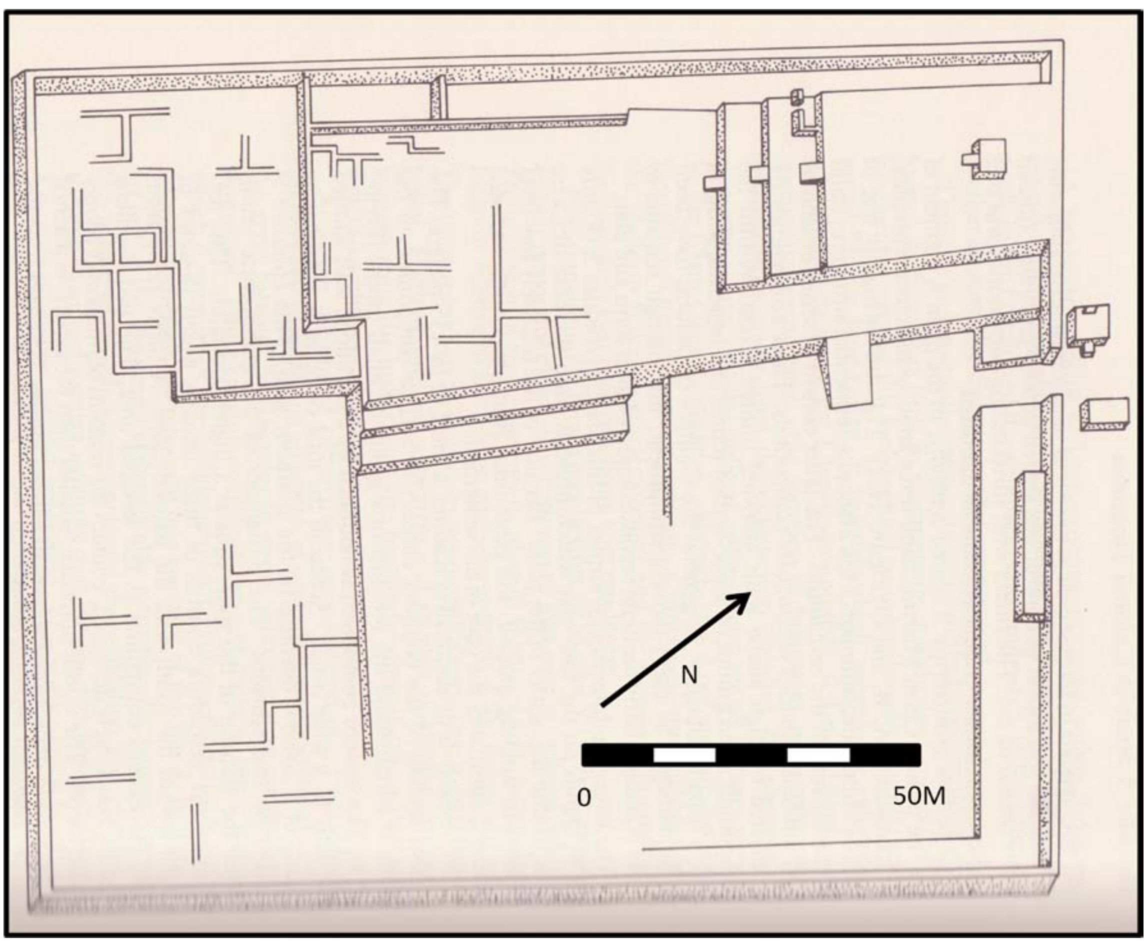
Figure 9.4 – Galindo Platform A Complex – Scanned from McEwan (1990)



At first glance, the *cercadura* architecture appears to be a much better "fit" with Chan Chan, despite the variation in their internal layout and orientation. Focusing upon *Cercadura A* (which seems to be the most "ciudadela-like") there are some interesting architectural similarities with Chan Chan such as its single north entry that leads into a large plaza containing a ramp/platform feature (see Figure 9.5). However, relative to the ramp/platform, the entry is in an anomalous location as it is situated almost adjacent to the ramp/platform. Furthermore, the ramp/platform is adjacent to the east-side of the room. Immediately behind the ramp/platform and visible to those in the plaza are a series of three, truncated ramp/platform features that face south. Based upon Bawden's rendering (1982:298), there does not appear to have been an additional, nested plaza/ramp/platform area. To sum, despite some similarities in form, the layout of the ritual spaces utilized in the two sites differs markedly.

To be sure, there are some additional, general architectural similarities between Galindo and Chan Chan as both sites used high-walled, compound style architecture that was of a generally elongated rectilinear form and contained some plazas. However, Jatanca and Chan Chan share far more architectural/organizational features and to a much greater degree of specificity – despite the time/space divide – than do Chan Chan and Pikillacta, or Chan Chan and Galindo. This fact alone argues strongly that the architectural expression of urbanism on the Peruvian North Coast was a pan-regional phenomenon that cannot be understood as either simplistic highland/lowland contact, or a linear progression of steady, in-situ development.

Figure 9.5 – Cercadura A – Scanned and Modified from Bawden (1982)



Mechanisms of Architectural Transfer and Reproduction

It could be argued that a major shortcoming in the work of both McEwan (1990, 2005) and the Moche Valley Project (1982) is that they fail to explicitly describe the process by which architectural canons were passed between cultures through time and space. I would argue that the mechanism, of transfer has been under-theorized and constitutes a central weakness of both models. McEwan (1990) argued that the initial settlers of Chan Chan found Wari styles of imperial architecture "appealing" for several reasons. First of all, sociopolitically the timing was right for the adoption of Wari architecture as the founders of Chan Chan were becoming more secular, rejecting huacas which were an indication of religion-based rule, in favor of compounds which were a symbol of a secular ruling class. Secondly, the foreign styles allowed, "the Chimú governing elite to legitimize and enhance their imperial prestige by adopting the only previously existing imperial style for their capital" (1990:113), which gave the founding elite of Chan Chan a kind of instant credibility by embracing symbolic capital associated with the powerful Wari (see Hobsbawm and Ranger 1983). McEwan states: "As a new North Coast Empire was coming into being, the rulers *looked to* the Wari model for prestige architecture" *emphasis mine* (1990:113). But even if McEwan is correct and the Chimú purposefully adopted Wari imperial architecture as their own, this still leaves several unanswered questions. Why does such an exotic adaptation or appropriation legitimize power? What exactly does "looked to" signify in terms of information transmission related to the adaptation of architectural canons from a non-local group? And to where exactly did the Chimú look? McEwan uses Pikillacta for his architectural comparison with Chan Chan despite the presence of the much closer Viracochapampa, ostensibly because Pikillacta is better-preserved, mapped, and is a better physical fit. However, Pikillacta is located some 950 kilometers to the south of Chan Chan, within the extremely rugged Central Andes, making the likelihood that a Chimú architect ever saw the site and then returned to the Moche Valley with a model in mind highly unlikely. Other possible Wari type-sites that could have influenced the architects of

Chan Chan include Azangaro and Wari. However, both of these sites are also located a considerable distance from Chan Chan - approximately 750 kilometers (Google Earth) – meaning that they too are somewhat unlikely candidates for architectural inspiration. Indeed, if the founders of Chan Chan, "looked to" the Wari for their own model of Imperial architecture, then the distance that separates Chan Chan from Wari Imperial sites is no minor issue, nor is the lack of explanation as to the mechanism of information transfer.

Members of the Chan Chan-Moche Valley Project are not much more specific in discussing the mechanism by which architectural canons were transferred between Galindo and Chan Chan. To Bawden[7] (1982; see also Lockard 2009), Galindo was one in a series of Moche Valley sites the occupation of which extended from at least the Salinar through the initial occupation of Chan Chan. Ultimately, "… the architectural and related administrative innovations which appeared first at Galindo *continued* in the Chimú period, being utilized at Chan Chan to integrate the social ideological, and political structure of a great empire" *emphasis mine* (1982:320). As with the highland/lowland example where the Chimú "looked to" the Wari, the exact means by which the trends in administrative architecture were *continued,* or *why* they were continued is not defined.

This chapter will now examine in greater detail how social memory could have been a significant mechanism in the adaptation, recontextualization, and long-term use of compound style architecture as a political symbol of imperial Chimú rule at the capital of Chan Chan. In fact, the architectural expression of urbanism that reached its apogee at Chan Chan was the result active indigenous history making (including historical commemoration, inventions of tradition, historical revisionism, etc,) that was negotiated spatially and materially by numerous North Coast polities from the Formative era to the time of the conquest. In fact, the analytical construct of social memory best-distills these complex processes and is a trope that most convincingly explains the striking continuities in the long-term development of pan-North coast

[7] Bawden does admit that the period between the collapse at Galindo and the beginning of Chan Chan is "poorly understood" (1982:320).

monumental architecture. It is at this point that this chapter directs its attention to a discussion of the phenomena of collective social memory.

Collective Social Memory

Recently, the concept of social memory has been developed and utilized as a means of examining the relationship between past experiences and present conditions be they social, political, economic, etc (Bevan 2006; Connerton 1989; Halbwachs 1992; Hobsbawm and Ranger 1983; Saunders 2001). In general, social memory can be viewed as a theory where memory serves as a form of cognition and actively shapes and guides behavior at a range of levels from the individual to the group (Connerton 1989; Saunders 2001). One major proponent of this area of theoretical inquiry is Paul Connerton who argues that the manner in which the present is experienced and contextualized is dependent largely upon one's past experiences (1989).

To Connerton, this temporal connection is pervasive throughout one's life as the present is "causally connected with past events and objects, and hence to events and objects that we are not experiencing when we are experiencing the present" (1989:2). Indeed, Connerton argues that throughout any given day, it is necessary to employ, consciously or unconsciously, this mental framework constructed from past events and experiences in order to make sense of present situations, experiences, emotions, etc…. Connerton states:

> "…prior to any single experience our mind is already predisposed with a framework of outlines, of typical shapes of experienced objects. To perceive an object or to act upon it is to locate it within this system of expectations. The world of the percipient defined in terms of temporal experience, is an organized body of expectations based upon recollection."

Collective social memories can be constructed and maintained in many ways ranging from the informal retelling of daily events, to highly structured ritual activities. For example, Connerton (1989) argues that collective social memories can be created, passed, and maintained through "informally told narrative histories" which are argued to be a fundamental activity participated in by humans (as either story tellers or recipients) and make up a basic feature of any group's repository of communal memory. For example, within villages Connerton argues that:

> "Most of what happens in a village during the course of a day will be recounted by somebody by the day ends and these reports will be based on observation or first-hand accounts. Village gossip is composed of this daily recounting combined with lifelong mutual familiarities. By this means a village informally constructs a continuous communal history of itself: a history in which everybody portrays, in which everybody is portrayed, and in which any act of portrayal never stops."

Connerton further states:

> "The narrative of one's life is part of an interconnecting set of narratives (asking accounts, giving accounts, believing and disbelieving stories about each other's pasts and identities); it is embedded in the story of those groups from which individuals derive their identities"(1989:21).

Therefore, collective social memories can be constructed from daily events (witnessed first-hand or otherwise), passed to others and via social interaction such as storytelling and gossip, and maintained collectively at the level of both the individual and the group. Ultimately, Connerton argues that individuals and groups that interact within any social order unconsciously assume the presence of a shared social memory (1989).

In addition, ritual constitutes a far more structured means by which collective social memories are created and transferred. Fortunately, for archaeologists, the material signatures of ritual practice are often the best preserved and contextually complex components of the archaeological record. Indeed, it would not be an exaggeration to claim that the commonly identified material correlates of ritual constitute the decipherable correlates of social memory as well (see Fogelin 2008; Kyriakidis 2007). Therefore, the use of Connerton's perspective regarding collective social memory, as opposed to other scholars such as Halbwachs[8] (1992) is especially appropriate when examining Pre-contact Andean architectural development as the role of the written word in sustaining the phenomena of collective memory is deemphasized.

[8] Although Connerton bases many aspects of his theory on Halbwach's work (see below)

Instead, Connerton argues that in addition to daily, informal face-to-face interaction and recounting, ritual activity provides a critical, far more formal, interface between the collective past and present as this is a time when “recollection and bodies are brought together in the same space.”

Connerton views ritual as functioning at least in part as a performative, formalized language (1989). As a performative language, ritual is not concerned with the descriptive of actions, but is instead focused upon the performative itself, without which, there is no ritual (Connerton 1989). The equating of ritual with a formalized language is based upon the presence of “invariant sequences of speech acts” that are stylized and stereotyped (Connerton 1989). Connerton (1989:58) states: “The utterances are not produced by the performers, but are already encoded in a canon and therefore exactly repeatable.” Therefore, prior to ritual activities, there exists the “script” that must be followed by all of the gathered participants if the oath, rite, curse, or blessing is to be successful (Connerton 1989). As Connerton argues:

> “Through the utterance of the ‘we’ a basic disposition is given definite form, is constituted, among the members of the liturgical community. The community is initiated when pronouns of solidarity are repeatedly produced. In pronouncing the ‘we’ the participants meet not only in an externally definable space, but in a kind of ideal space determined by the speech acts. Their speech does not describe what such a community might look like, nor does it express a community constituted before and apart from it; performative utterances are as it were the place in which the community is constituted and recalls to itself the fact of its constitution (1989:59).”

This is not to say that Connerton’s view of social memory is monolithic in its perspective and that everyone shares or values the same collective social memories, as past individual experience plays an important role in defining the conditions of one’s present. People of a similar generation, social class, and even household will experience and interpret their present in different ways due to the presence of individual memories of events and the emotions those experiences evoke (Connerton 1989). As memories diverge, so do the experiences and assumptions that can be readily shared within and among groups and individuals (Connerton 1989). For example, communication across generations can at times be difficult due to the presence of different memory sets (individual and collective) creating what is commonly referred to as a "generation gap." But to some degree, collective social memories can be identified among groups as the constituents of any social order must take as fact the presence of a shared memory without which communication and interaction on a meaningful level would be impossible (Connerton 1989).

Manipulating Collective Social Memories via Monumental Architecture

Critical to this research is that collective memory legitimates present sociopolitical orders in no small part by imbuing them with a natural, timeless quality (Connerton 1989; see also Bloch 1986; Patterson 2004; Van Dyke 2009). Therefore, the social memory of a people can be actively manipulated in a multitude of ways so as to maintain, deny, or establish a new sociopolitical status quo (see Bevan 2006; Patterson 2004; Yoffee 2007). In his historically-based examination of collective social memory, Connerton argues that "The ruling group will use its knowledge of the past in a direct and active way" (1989:17-18). For example, the state apparatus can be used to systematically shape (or re-shape) the collective social memory of its citizens via avenues that involve memory deprivation. For example, Connerton (1989) argues, "…the mental enslavement of the subjects of a totalitarian regime begins when their memories are taken away" such as was the case in Czechoslovakia during the German occupation. During this period of conflict and foreign occupation, writers, historians, archaeologists, and other university intellectuals were systematically dismissed from their post in an effort to restructure and deny the Czechoslovakian past so as to establish a new social order as envisioned by the occupying German state (Connerton 1989; Trigger 2006).

While social memories and histories can be manipulated in an effort to create new traditions via a number of media such as ceramic, textiles, and ritual displays (see Crawford 2007; Connerton 1989; Patterson 2004; Van Dyke 2009), of special interest to this chapter is the purposeful manipulation of monumental architecture and landscapes during periods of radical social restructuring (Bevan 2006; Van Dyke and Alcock 2003; Quilter 2001; Yoffee 2007). In fact, the incorporation of architectural data into this discussion could be considered a natural extension since Connerton (via Halbwachs) makes it clear that there is a strong connection between collective memory and constructed spaces.

> "Groups provide individuals with frameworks within which their memories are localized, and memories are localized by a kind of mapping. We situate what we recollect within the mental spaces provided by the group. But these mental spaces, Halbwachs insisted, always receive support from and refer back to the material spaces that particular social groups occupy. …. Our images of social space, because of their relative stability, give us the illusion of not changing and of rediscovering the past in the present. … Our memories are located within the mental and material spaces of the group" (1989:37).

Architecture and landscapes have been purposefully manipulated so as to alter collective social memories (or political "historiography") and create new traditions so as to justify changes in sociopolitical organization for thousands of years (see Bevan 2006; Patterson 2004; Quilter 2001; Van Dyke and Alcock 2003; Van Dyke 2009; Yoffee 2007). It is clear that even in the ancient past, architecture and landscapes represented an important tool that could be harnessed, manipulated, or obliterated by social segments in an attempt to alter the collective social memory of a people, create ties to the past (ancient or recent), and by extension justify changes, or restructuring in social order (Saunders 2001; Silberman 1989; Van Dyke 2009; Yoffee 2007). According to Bevan (2006), this can take two major forms: activities that deny a group of their past through architectural destruction and/or alteration ("strategies of forgetting"); and architectural adaptations or associations that form a link (sometimes highly specious at best) between current social orders and the distant, sometimes mythical past ("acts of remembering").

Acts of war and "ethnic cleansings" provide numerous examples of how landscapes and architecture are altered, or outright destroyed so as to deny groups (ethnic, national, religious, racial etc…) of their sense of place and history (see Bevan 2006). The wholesale destruction of non-militarily significant buildings and bridges in Bosnia-Herzegovina provide a distressing number of examples where architectural annihilation that resulted in radically altered landscapes were primarily geared toward denying ethnic groups of their historiography (Bevan 2006). Widespread architectural destruction of religious monuments and churches, synagogues, and mosques were in some respects specifically designed to remove all visible traces of the constructed history, or historical moorings of specific ethnic and religious groups in order to deny them their past (Bevan 2006; see also Silberman 1989; Yoffee 2007). Yet, within Bosnia-Herzegovina, this re-writing of the past was not restricted solely to buildings of religious identity and importance as demonstrated by the bridge at Mostar.

The cat-back bridge in Mostar, the Stari Most Bridge, was built in the 16th Century by the Ottomans and became an important symbol of what was then the highest number of ethnic intermarriages (among Muslim, Serb, or Croat) in the country (Bevan 2006). During the intervening years between construction and war, the bridge came to both symbolize the city and provide an important focal point for social interaction within the community and was deeply impressed within, and symbolic of the social memory of the community (Bevan 2006). In 1993, Croat gunners intentionally fired some 60 shells at the bridge in a successful effort to destroy it – despite the fact that the bridge had no military significance whatsoever (Bevan 2006). As argued by Robert Bevan (2006:25), "The attack on the bridge was an attack on the very concept of multi-ethnicity and the co-joined communities it had come to embody." I would argue that it also represents an attack on the collective identity and social memories held by those in Mostar. The destruction of the bridge was both a deliberate attempt on the part of the Croats to destroy an important constructed meeting space (where collective memories were recreated) and an attempt to disconnect the community from the collective social memories that defined and justified their present order through the destruction of an important local community symbol (Bevan 2006).

The Nazi oppression of the Jews during the 1930's and 1940's provides an additional example of a dominant social segment attempting to eradicate the social memory and historically grounded identity of a minority group through the manipulation of space and architecture. Throughout the Nazi regime, but especially after *Kristallnacht* in 1938, symbols of the Jewish community, especially synagogues, were attacked in an effort to deny the Jews of their past (Bevan 2006). However, additional important symbols of Jewish daily-life such as hospitals, schools, and businesses were also assaulted, quickly escalating to the re-emergence of Jewish Ghettos, and ultimately with the horror of concentration camps designed specifically to contain and eradicate the European Jewish population once and for all (Bevan 2006). However, in what can only be described as an extraordinary attempt by a governing power to manipulate the collective social memory of its constituents, the Nazi plan to eradicate Jews, as outlined in the "Final Solution" in 1942 did not call for their complete eradication from the historical record or collective conscious of the world. Indeed, somewhat paradoxically at first glance, key examples of Judaica were to be eventually housed in a museum within Prague. According to Historian Elizabeth Domansky (1992), "The Jews were not to be annihilated and then forgotten, but annihilated and then remembered forever….Eternal death was not to be oblivion, but the torture of being eternally remembered by the persecutors" (see Bevan 2006).

It should be noted that even during times of relative "peace" architecture and the landscape can be manipulated to erase or radically reconstruct historical narratives. The benign neglect of ethnically significant structures or the active promotion of a political position can be achieved through alterations in the built environment (Bevan 2006; Silberman 1989). For example, in the modern nation-state of Turkey the government has begun to actively promote monuments that emphasize the "secular" achievements of Hittites in an attempt to de-emphasize Muslim and Ottoman traditions (Silberman 1989).

Architecture and the landscape can also be mobilized to control social segments in an effort to create links (specious or otherwise) between the present and past, which can then be used to justify new sociopolitical order, and in the process, create new social memories – in some cases largely from whole cloth (Hobsbawm and Ranger 1983; Silberman 1989; Van Dyke 2009). For example, ancient architectural forms and features were often adopted by ruling social segments in an effort to create quasi-links to grand or even mythical pasts even when the initial "meaning" of the feature has been lost or altered (Conklin 1990; Van Dyke and Alcock 2003; Van Dyke 2009; Yoffee 2007). For example, Washington DC's political topography mimics Old World architectural canons such as the obelisk, the dome, and Neo-classical architectural styles. There is little doubt that few Americans knew then (or now, for that matter) the origin of these forms, or their initial "meanings" (see Conklin 1990; Patterson 2004). Yet these architectural styles were readily adopted to commemorate and symbolize the formation of the new nation. In the case of the use of Neo-Greek and Roman architectural styles, there is no doubt that few Americans had ever been to Greece or Rome and seen these ancient architectural forms in situ, knew the details of their development, or understood the symbolic minutia of the architectural details (see Conklin 1990). Yet these styles were readily adopted, for reasons that can be explained at least in part with reference to social memory. First of all, the 18th century US government, as with the proponents of the French Revolution looked to Rome for their initial inspiration due in no small part due to Rome's association with political longevity. Indeed, while most 18th century Americans probably knew very little about the specifics of Roman history, within their collective memory Rome was the "Eternal City" and represented the very same political stability that the new country desired. Later, during the early 19th Century, American consciousness of the ancient Greeks was raised in general due to their recent victory for independence over the Ottomans in 1820, which helped foster additional romantic recollections of the Classical world, in this case an association with ancient Greek heroes (Silberman 1989). In addition, within the distant collective social memory of Americans was the highly-simplified notion that the Greeks had "invented" democracy – the cornerstone of the newly founded American political system. Part-and-parcel with this was that most Americans (and certainly those in power) collectively viewed the newly-formed country as a "land of opportunity," and the "land of the free." In reality, that American democracy and platitudes related to freedom had very little to do with the ancient Greek system of democracy was inconsequential: within the collective social memory of 19th Century Americans the Greeks had "invented" democracy. Therefore, despite the largely-lost meaning of Greek architectural facades within the collective social memory of the United States, no architectural form could have been more appropriately used by the emerging power-brokers in constructing Washington DC (and many state capitols) as Neo-Greek architecture symbolized the collective desire of the American people to carry the newly re-lit torch of democracy handed to them over time and space by the Greeks and Romans. In the process, the formulation of new collective social memories associated with the United States' use of the ancient Classical forms was initiated.

While the above examples demonstrate that agents within relatively modern nation-states manipulate the past as a means of justifying present social order, ancient landscapes and architecture were also purposefully altered in an attempt to either accentuate "remembering" or hasten "forgetting" the past. Numerous examples related to "remembering" the past are associated with the Greeks (see Yoffee 2007). For example, the acquisition of Greek art served as status symbols for well-to-do Romans and was widely collected in certain circles "performing memory in the broadest sense" by providing the owner with a tangible link to the past, ultimately demonstrating ownership of the past (Crawford 2007).

Mycenaean tombs provided sources of legitimacy to both developing segments of elites and the polis within Early Iron Age Greece (Button 2007). For the elites, they provided tangible evidence of heroic ancestors while to the *polis* they provided important common ancestors, resulting perhaps in the exacerbation of social tensions between two competing groups that derived their collective identities from the same material source (Button 2007; Morris 1988). In this case, legitimacy for both groups may have been contested based upon differing interpretations of the same material past. During more-recent Greek history the degree to which the past was invoked to justify the present can be demonstrated with the construction of a “mock Mycenaean platform” constructed in the 8th century using Bronze Age techniques so as to legitimize land claims and/or heroic ancestry through the creation of memories out of whole cloth (Button 2007). During the Roman Augustinian occupation of Athens, the Temple of Roma and Augustus was added to the Acropolis. The placement of this structure – on a peak directly in front of the Parthenon - greatly altered the immediate architectural landscape, creating “new memories, and entailed the forgetting of old ones” (Thakur 2007:123).

In addition to “remembering,” select social segments within some early historic polities also attempted to enforce “forgetting.” Imperial Rome enforced “forgetting” quite literally as emperors such as Caligula, Nero, and Domition all received a “ban of remembrance” after being discredited upon death (Crawford 2007). It has been suggested that “this practice conveys a Roman awareness of the malleability of historical truth and illuminates a Roman preoccupation with posthumous history and fame (Crawford 2007). Censure against these deceased individuals could include having their name stricken from official lists, the annulment of wills, forfeiture of property, interdictions against the use of funerary masks representing the deceased, and having their birthday declared as a day of bad omens to the Roman citizens (Crawford 2007). The landscape and architecture of the ancient world could also be manipulated in an intentional effort to hasten “forgetting.” The Urartians “obliterated the memory of their forerunners” by leveling their settlements before initiating rebuilding (Khatchadourian 2007). This strategy of landscape exploitation has been called a “technology of political memory and forgetting,” by Adam Smith (2003). The Temple of Hathor (begun in 54 BC) was defaced during the 5th or 6th Century by Christians bent upon the eradication of pagan images. Catherine Crawford notes that, this is a clear demonstration of the power that images and objects have, and the destruction of them is probably an attempt to destroy what they signified” 2007:31). Of special interest is the similarity between the Nazis’ plans for the curation and display European Judaica and the Christian defacement of the Temple of Hathor. In both instances, such acts were not intended to forever eradicate past memories or gods, but to restructure and legitimize their disgrace, perfidy, and inferiority. In the example of Hathor's desecration, the newly defaced goddess was purposefully displayed – perhaps in an effort to publicly ridicule and demonstrate her impotence in the face of encroaching Christianity (Crawford 2007). In this case, the wholesale eradication of local collective memory through architectural manipulation was not the goal rather a "revised memory of the past" was the intention of the invaders (Crawford 2007).

It is of interest to note that for both modern and ancient peoples, attempts to alter the social memory of the constituency through the manipulation of architecture and landscapes often correlates with times of extreme social stress (Alcock 2002; Bevan 2006; Connerton 1989; Yoffee 2007). Indeed, during times of social upheaval, a multiplicity of competing attitudes and political strategies related to collective social memory can be exposed, with landscape and architecture securing center stage within such battles of representation (Bevan 2006; Crawford 2007). In a reductionistic sense, the obliteration of religious and national monuments in Bosnia-Herzegovina is the direct result of open conflict between religious and nationalist movements, the foundation of which can be found within deep-seated tensions between the various protagonists, reified in no small part by the differing collective memory experienced by each group (Bevan 2006; Connerton 1989). Evidence of landscape and architectural alteration occurring during times of extreme social unrest and political power struggles can also be found in the ancient world (Alcock 2002; Bevan 2006; Crawford 2007; Kadambi 2007). The social and religious upheaval that surrounded the reign and death of Akhenaton is instructive here. Akhenaton's establishment of an entirely new Egyptian capital at Amarna was in no small part the result of a desire to break free from the Pharaonic memories associated with prior capitals (Crawford 2007). At his death, Akhenaton was symbolically punished if not outright humiliated through the defacement of his image by the followers of Amun. However, in many cases the defiled images were left to stand, perhaps as a perpetual testament to the power or "correctness" of the re-emergent religion and its adherents and to simultaneously serve as a warning to those who might attempt to revive heretical beliefs in Aton. No matter the motivation, the visual humiliation of Akhenaton's image must have greatly altered the landscape and collective memory of those residing in Late kingdom Egypt.

The invocation of the past also occurs during times of sociopolitical stress as has been pointed out by Silberman (1989) who noted the almost cyclical waxing and waning related to the recognition of the Pharaonic past by 20th Century Egyptian nationals. Silberman argues that this occurs in direct relation with the country's "political position in the modern world," as during times of social unrest, Egyptian leaders are more likely to invoke images of the powerful, unified Pharaonic past (Silberman 1989). The first such event of such a remembrance occurred during the 1920's with the discovery and excavation of of Tutankhamun's tomb by Howard Carter, which coincided with the turmoil surrounding colonial Egyptian independence from British rule. While the use of the Pharaonic past by the Egyptian government waned during the pan-Islamic agitation that began in the 1930's, it has reemerged on two other occasions – during the turbulent period governed by Gamal Abdel Nasser, and again during the 1970's by Anwar Sadat who readily invoked romantic images of the Pharaonic past (Silberman 1989).

Polities throughout time and space, literate or otherwise, selectively utilized the past to justify the present. "Golden ages" were commemorated and actively "remembered" through a variety of media and through activities such as national parades and celebrations (Silberman 1989). Acts of social forgetting can be enforced through the obliteration of symbolically important architecture, places, and monuments as demonstrated by the recent toppling of statues commemorating the rule of Sadam Hussein in Iraq (see Bevan 2006). By selectively remembering and forgetting the past through a combination of landscape and architectural alterations (among other media and activities) polities throughout time and space were able to "use the past to validate the present" (Connerton 1989:8; Silberman 1989). The numerous archaeological examples of social memory being influenced by empowered social segments tangibly demonstrate that the past was also manipulated in the past through alterations in space and architecture so as to alter the collective social memory of people for the purpose of justifying then-current social order. As the above examples demonstrate, the interpretive framework of remembering and forgetting is an effective place to begin the analysis of how the past was used in the past. However, that mnemonic battles can transcend categorization in these two types alone, must be kept in mind. At this point, the above ideas and themes can now be applied in order to examine specific issues related to the Peruvian North Coast such as the role played by Jatanca in the spatioarchitectural form of urban Chan Chan, the architectural relationship between the two sites, and the development of a general model by which North Coast urban processes can be better-understood.

The above examples demonstrate that history, or the past (both real and imagined) was manipulated by individuals and/or groups for political purposes among many cultures throughout the world. By either invoking the past through purposeful acts of remembering, or denying it through strategies of forgetting, the past could be used as a point of contestation among social segments vying or consolidating control within a given society (Patterson 2004). While there were many media within which these contests could take place, one important tool used in this process was the manipulation of monumental architecture (and its associated space) due to the social memories with which they were invested (Bevan 2006; Yoffee 2007). Monumental constructions may have been especially attractive points of historical manipulation due to their visibility and relative permanence, which might also transcended into a feeling of permanence, or naturalness within the realm of societal order as well (Bevan 2006; Van Dyke and Alcock 2003; Van Dyke 2009; Yoffee 2007). As such, monumental architecture was an icon that had the ability to provoke social memories with just a glance. To sum: The manipulation of monumental architecture allows for the manipulation of social memory, which, according to Connerton (1989; see also Patterson 2004) can be used by individuals or societal segments to gain a political advantage over others.

These same principles that tie social memory to public architecture and have had a profound impact upon the development, use, and rejection of monumental forms throughout time and space can also be identified along the North Coast of Peru. Acts of remembering and strategies of forgetting were manifest in the monumental architecture of the Chimú in an effort to manipulate recent and ancient history, and by extension social memory and political power. In this case, the use of the adobe huaca – a hallmark of Moche culture – was rejected as a major monumental form in favor of the much older compound-style architecture that characterized Formative Period sites such as Jatanca. Compound architecture, whose meaning had been rendered somewhat malleable by the passage of time (see Van Dyke 2009), was revitalized in an effort to create a tie (real or imagined) with the past and perhaps, in essence, "naturalize" social hierarchies. This issue is explored below.

Jatanca, Chan Chan, Social Memory, and Agency

When I first proposed to conduct research at Jatanca I was under the general impression that it was largely a Chimú site. There were two reasons for this error. First of all, I was operating with an incomplete understanding of the Late Formative Period ceramics (see Chapter 4). More importantly, however, a cursory examination of the compound configuration at Je-1023 during two prior field seasons (1997, 1999) gave me the impression that the compounds were Chimú in origin. While Jatanca is much smaller in scale, the resemblance to Chan Chan is uncanny – especially with regard to the form and nested organization of plazas and the patterns of indirect interior access (Chapters 6 and 7; see also Moore 1996, 2005, 2006; Uceda 1999). Subsequent ceramic research (see Chapter 4) and the results of AMS dating (see Chapters 5 and 6) unequivocally demonstrate that Jatanca's occupation does not date to the Late Intermediate Period, but was inhabited for a relatively short period of time and abandoned approximately 700-800 years before the founding of Chan Chan (see Lockard 2009). Nonetheless, I argue that Formative Period compound structures such as Jatanca played at least some role in the architectural development of Chan Chan.

While the attempt to examine and identify the origin of Chan Chan's urban expression by both McEwan (1990) and the Chan Chan Moche Valley Project (1982) were at odds, they were united in one respect: both models of architectural development relied upon relatively contemporary cultures and architectural expressions when identifying the primary influences upon Chan Chan's urban design. McEwan (1990) argued that the contemporary Wari provided the primary architectural influence, while the Chan Chan Moche Valley Project members asserted that the urban layout and architectural expressions exemplified by the Chimor capital were the result of a direct and largely uninterrupted continuation of developments that began at nearby Galindo (Moseley and Day 1982; Lockard 2009). Neither group considered the possibility that at least some of the architectural influence (or inspiration) manifest ultimately at Chan Chan could have come from a much earlier source, nor did they adequately explain the mechanisms by which the transmission of architectural knowledge was undertaken.

One person who has examined the architectural development of Chan Chan through the lens of long-term social memory is William Conklin[9] (1990). While not expressly utilizing social memory as defined by Connerton (1989) or Halbwachs (1992), Conklin did incorporate two somewhat related ideas, *memory* and *image*, along with *use*, into his three-part analysis of Chan Chan's architectural growth (1990). It is the first two concepts, memory and image, that are of concern to this chapter. Conklin (1990) confined his definition of memory to those associated strictly with architecture – especially with regards to the power of architecture to continue to make an impression on people despite the loss, or shift of the specificity of meaning. Image is defined as:

> "…that which remains in the mind of the viewer after he has turned away from the actual scene. Image refers to that interpreted and censored record remaining after vision itself has been completed. Image is both more and less than a photographic record and involves a memory of associated emotions and impressions as well as a memory of form" (Conklin 1990:45).

In this sense, and somewhat contra Connerton (1989), both memory and image are constructed by the individual with evidently little to no input from the dynamic of the

[9] For Moche-related examples, see Quilter (2001).

collective group. As will be demonstrated below, however, this could be considered a bit of a shortcoming in Conklin's model of North Coast architectural development.

Conklin argued that three major Moche sites formed the material repository of memories among "at least the elite" of the early Chimú: Pampa Grande (see Chapter 2) in the Lambayeque Valley, Galindo, and Huaca del Sol/Luna. However, he also acknowledged that abandoned huacas within the Moche Valley "also must have formed a background architectural consciousness among the early Chimú" (1990:46). Conklin used a kind of "grab-bag" approach in defining the specific architectural forms that adumbrate developments at Chan Chan. From Sol/Luna the Chimú adopted the U-shaped form later expressed in the *audiencia* (Conklin 1990; but see also Keatinge 1977). Evidently, it was Galindo that inspired Chan Chan's use of walls that functioned to protect courtyards, the activities that occurred within their confines, and to keep "classes" separated. With regard to Pampa Grande, it is more difficult to discern exactly what Conklin contended were the architectural inputs later utilized in the construction of Chan Chan. It would seem, however, that the use of overly-large scales of construction for central architectural elements such as huacas and ramps was a concept later adopted by the Chimú in the construction of their almost 10-meter high walls (Conklin 1990).

Conklin (1990) argued that Chan Chan's architectural form is the result of a more widespread geographical input than do McEwan (1990) or those affiliated with the Chan Chan Moche Valley project (Bawden 1996, 2001; Moseley and Day 1982). However, in terms of the antecedent architectural forms that might have inspired the urban form of Chan Chan, Conklin adopts a generally fairly narrow chronological view as he tends to look toward recently abandoned Moche sites and not toward the even earlier Formative Period sites that also made up an important part of the socially constructed coastal landscape. By ignoring the social memories embodied within the North Coast landscape and Formative Period architecture, Conklin (1990) restricted his ability to discuss some of the deeper, political motivations related to the adaptation and rejection of even earlier architectural forms with which the nascent Chimú were also familiar. In other words, the wider motivation behind the adaptation of specific architectural forms within Chan Chan is under-explained. Indeed, Conklin (1990) offers no explanation as to why the huaca was rejected by the Chimú. I would argue that one critical means of understanding at least some of the motivations behind the development of Chan Chan's urban form is through a consideration of the presence of collective social memories and the selective use of architecture by privileged social segments as strategies of political legitimization based loosely on the fluid poles of strategies of forgetting and acts of remembering.

Though opinions vary somewhat, the founding of Chan Chan probably occurred during the Middle Horizon, a short time after the rapid abandonment of Galindo (Bawden 1982; 1996; Lockard 2009) and Pampa Grande (Shimada 1994). The rapidity with which these sites were abandoned may indicate that social upheaval during this period was widespread along the North Coast. In fact, abundant evidence of unrest can be found at both sites. According to Izumi Shimada (1994) significant portions of Pampa Grande were burned to the ground. Indeed it is tempting to consider the possibility that the burning of Pampa Grande's wood and cane superstructures was a purposeful act of forgetting initiated by residents of the site, or the public defilement and rejection of former symbols of social order within the Lambayeque Valley. The site of Galindo appears to have been created out of a general milieu of rapid social change and perhaps discontent within the Moche Valley (Bawden 1982; 1996; Lockard 2009). Architectural canons such as the adobe-built huaca that were at one time the primary focal point of Moche sites decreased greatly in size at Galindo and were relegated to the periphery of the settlement (Bawden 1982). A series of walls were constructed to segregate social classes and demarcate and protect areas of mass storage that were evidently under the control of a centralized, increasingly secularized government (Bawden 1982). Yet perhaps the greatest indicator of rapid social change and even social unrest at Galindo is the transformation underwent in burial patterns. Formerly, the Moche typically used cemeteries for the interment of dead individuals (see Moseley and Mackey 1982; Donnan and Cock 1998), but at Galindo – especially near the time of abandonment –

individuals were increasingly interred within household benches (Bawden 2001). Given the generally conservative nature of mortuary practice (see Huntington and Metcalf 1979), this radical change may be further evidence that the sociopolitical organization at Galindo was under tremendous stress and that new histories and traditions were being actively created.

It was within this general environment of social turmoil that Chan Chan was founded. Therefore, it could be argued that of major importance to the social segment that was able to gain organizational control of the nascent site was the establishment of some sense of sociopolitical stability. One possible means achieving this goal was through the selective remembering and forgetting of past landscapes and architecture around which collective social memories were formed, reified, and transferred across generations. I argue that among the architectural forms that were utilized by the Chimú as an aid in promoting a sense of social stability was the highly visible compound architecture of the Middle and Late Formative Period as exemplified at Jatanca – albeit with likely changes in many of the initial "meanings" of the structure as measured by the prevailing ideologies and cultural sensibilities of North Coast residents during the Late Intermediate Period. But the imprecise or vague social meanings of the compound form made it an attractive symbol for the newly formed Chimor kingdom as it both retained its time-depth within a perhaps mythical past and was rendered somewhat malleable in terms of its sociopolitical and/or politico-religious significance due to the imprecision by which it was remembered (Van Dyke 2009). In fact, it was possibly the lack of malleability in terms of meaning as measured by North Coast collective social memory that perhaps caused the adobe huaca to be de-emphasized, if not outright rejected by the Chimor, at least initially.[10] The North Coast recollections of social disruption, upheaval, and ultimately failure associated with this specialized architectural

[10] While there are four adobe huacas at Chan Chan, their relationship to the broader site is unclear (Moore 1996). What is known is that they are visually and physically marginalized from the ciudadelas via large walls that surround their perimeter (Moore 1996). In addition, Late Chimú burials have been found within Huaca del Sol/Luna. It is intriguing to consider the possibility that these burials were not deposited until the possible negative collective social memories initially associated with huaca architecture had, over generations, become imprecise enough so as to render the memories malleable and amenable to a reinterpretation that permitted the form to once again be honoured.

form were too recent and precise within the social memory of North Coast populations for its use to have continued. Therefore, by "remembering" via a large-scale architectural tie to an ancient, even mythical past, the appearance of social stability (or legitimate authority) was created at Chan Chan and was reinforced through both already existing social memories and through the formation of new histories, including origin myths and tales that were attached to these reinvigorated architectural forms and landscapes (Hobsbawm and Ranger 1983). This stability could be further projected with the construction of numerous additional compound-style edifices that both invoked the stability of the past, and the newly minted power of Chan Chan.

Beyond the desire to create a sense of social stability, and perhaps "naturalness" of social continuity via ties to the ancient past, there were numerous additional motivations to adopting the compound form of architecture and Jatanca-like internal organization as an act of remembrance by the Chimú. If, as argued by Moore (1996), there was a long history (and by extension, a collective social memory) of an ideology of social separation between at least some social segments of North Coast inhabitants, then compound architecture with its high walls, restricted points of entry, and winding passages (see Chapters 6 and 8) was in many respects the architectural embodiment of this form of social organization, rendering this structural form and layout even "attractive" to those attempting to forge ties to the distant past. Chan Chan's *ciudadelas* architecturally exemplify what were likely to have been a general trend toward increasing social segmentation. High walls, limited numbers of exterior entryways, tortuous passages, large open plazas that emphasized oversized architectural scale at the expense of the individual, all combined to reinforce dichotomies in social status at Chan Chan – just as they had done at Jatanca as well, albeit on a smaller scale.

Along these same lines, it is of interest to note the changes that occurred with regard to plaza design at both Je-1023 and Chan Chan. At Jatanca, the focal point of the plaza was a pair of mirror image ramp/platform features that sat on an elevated "stage." It was argued in Chapter 8 that these features were emblematic of a dual form of sociopolitical organization physically and symbolically centered within the compound. At Chan Chan, the central point of focus is also located in the south of the plaza, but instead of two ramp/platform structures, there is a single large platform that can be accessed from the plaza via a single centrally-located ramp. The elimination of the mirror image ramp/platforms may indicate that *Chimor* political power had become more centralized within the hands of a preeminent individual (and their lineage as well) who was also assigned to the *ciudadela* (which served as a base of political operations) much as the moiety-like dyads were assigned to Jatanca's compounds and which also served as the physical point of sociopolitical power within the Pampa Mojucape. While free-standing compounds at Je-1023 appear to have been constructed and occupied at the same point in time, the *ciudadelas* were not, and instead appear to have been tied to a succession of rulers whose relationship to each other is not clear. Again, the use of free-standing compounds would have been attractive to Chimor rulers as the structure could be seen to symbolize both power of rule and a certain degree of sociopolitical distance from prior rulers. In this sense, both enclosed north plazas and free-standing compounds were revitalized, redesigned, and reinterpreted to better-suit the needs of the Chimor kingdom and reflect concomitant changes in social order.

It is also intriguing to consider the possibility that the adoption of Jatanca-like compound architecture might also have presented the Chimú with justification for the eventual inter-valley conquest of the North Coast (Mackey 2006; Keatinge and Conrad 1983; Moseley and Day 1982; Moseley and Cordy-Collins 1990; Wilson 1988). To the north and south of the Moche Valley are examples of compound architecture that clearly antedate the formation of Chan Chan. The Casma Valley, located to the south has numerous Early, Middle, and Late Formative Period sites that are based on compound-style architecture (S. Pozorski and T Pozorski 1987; S. Pozorski 1987). Two of the sites, Pampa Rosario and San Diego are "…characterized by repetitive courts and small platforms with paired ramps, but no large mounds" (S. Pozorski and T. Pozorski 1987: 119), an organizational pattern that in some ways is similar to that of Jatanca. It seems highly unlikely that the nascent Chimú elite were unfamiliar with these architectural forms through first-hand experience (as Conklin 1990 would argue) and were given meaning through social memories that tied the then-present to the past via landscape features (Connerton 1989). Once adopted and incorporated into the collective social memory and newly-formed traditions of the Chimú, compound architecture might have been seen as a more or less direct link between Chan Chan and "ancestors" who were responsible for the construction of compound architecture-based sites outside of the Moche Valley. Therefore, by creating links to the past (real or imagined) through acts of "novel commemoration" and historical appropriation of architectural design used in adjacent valleys, the construction and manipulation of memory could be marshaled and used to justify the invasion of land outside of the Moche Valley. Therefore, it could be argued that for many Chimú, inter-valley expansion might not have been seen as an act of invasion, but instead as a return to a "distant" land from where they had "originated."

The question as to the degree to which Jatanca (or any other site, Formative in date or otherwise) may have played a role in the architectural form of Chan Chan or other hinterland Chimú compounds such as Pampa Mocan and Quebrada del Oso must be addressed, albeit in a highly-speculative manner. Certainly the site informed collective social memories that were tied to the landscape and architecture of the North Coast and were a part of the cultural *milieu* from which the Chimú revitalization of compound architecture was initially drawn. In this sense, Jatanca, along with the Casma Valley sites, played, at the very least a minor developmental role. Yet, the numerous settlement and architectural similarities shared between the two sites (see Chapters 2, 3, 6, and 7) might argue for a more direct, although long-distance connection as well. Therefore, it is also within the realm of possibility that Jatanca, along with any associated histories, tales, and myths associated with the site, was known first-hand to the early Chimor architects and served as an important model, or inspiration to both the settlement pattern and architecture of Chan Chan. The motivation in doing so was to tie the nascent Chimú culture to the distant past, but within a real, tangible landscape thereby lending additional credence to the creation of long-term cultural tradition, political stability and social order. As a result, Chan Chan was designed as a cluster of largely freestanding compounds (*ciudadelas*) surrounded sequentially by first a domestic zone, and then by an extensive system of agricultural fields. The *ciudadelas* were designed using highly specific features and complexes also found within Jatanca such as nested, replicated courts entered from the north that focused upon ramp/platform architecture in the south.[11] The privileging of right-hand access over left-hand access was also shared between these two sites.[12] Furthermore, if the Chimú considered Jatanca to be an important architectural type-site, and/or a place of origin (real or imagined) this might explain the complete lack of reoccupation upon its terminal Formative Period abandonment despite its location within the center of a pampa that was repeatedly used for long-term agricultural purposes (Eling 1987; see also Chapter 3). In this scenario, Jatanca was more than just another physical node in the collective social memory and history of North Coast populations, but instead transcended relative anonymity to become an important point where acts of remembering, landscape, and architecture were actively combined. Indeed, the extraordinary preservation of the site and the lack of later occupation (in a landscape that witnessed intense settlement in the Early Intermediate Period and Middle Horizon – see Dillehay et al. 1998, 1999, 2000, 2009) might suggests that Jatanca's monumental core was revered and even "curated." To date, however, supporting evidence of this, such as Late Intermediate Period ritual activity, such as secondary burial activity has yet to be found.

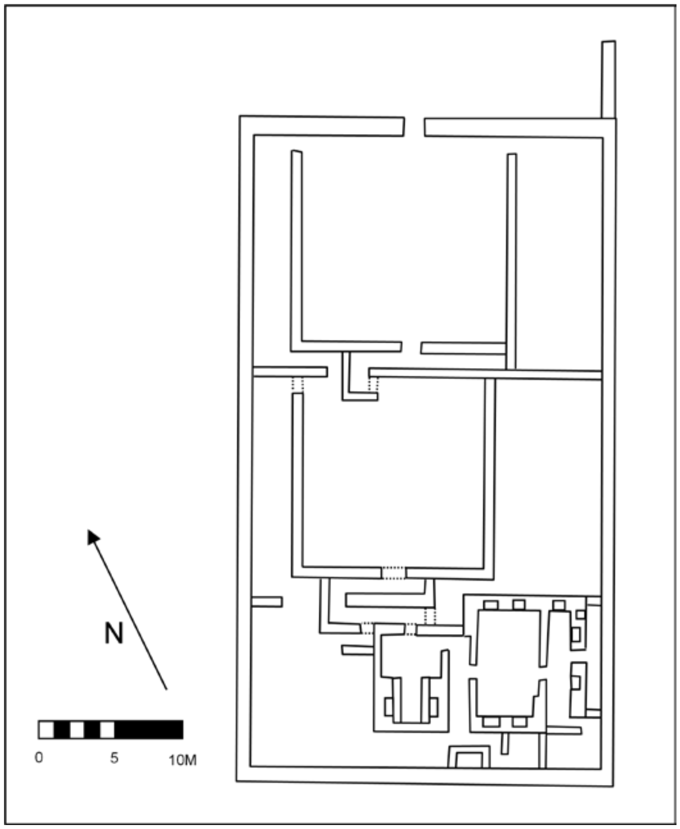
Nonetheless, there are two additional architectural indications as to the possibility that Jatanca was regarded as something more than just another abandoned site within the Middle-Horizon – Late Intermediate period landscape. Within the northern Chicama Valley is the site of Pampa Mocan (Figure 9.6). This site which is

[11] It is also possible that Keatinge (1983) was correct and that the form of the *audiencia was* originally developed within the Jequetepeque Valley and was reintroduced into Late Intermediate Period architecture at Chan Chan in an additional attempt to create ties with the past.

[12] What is especially interesting with regard to privileged access patterns is that within the Jequetepeque Valley, among later Moche sites, evidence of this pattern seems to disappear – at least within the hinterland sites mapped by Swenson (2004). Later, it is reintroduced into the Jequetepeque Valley at the Late Intermediate Period site of Pacatnamú (Donnan and Cock 1986; see also Moore 1996). Therefore, it is possible that the use of this pattern at Pacatnamú represents a revitalized architectural canon reintroduced into the valley by the invading Chimú, who initially noted its presence at Jatanca.

composed largely of a single free-standing compound made out of stone has been dated to the Late Intermediate Period through a combination of ceramics and nearby canals by Tom and Sheila Pozorski (1987; personal communication 2009). The resemblance between Pampa Mocan and the compounds of Jatanca – especially Compound III – is uncanny, yet it post-dates the occupation at Jatanca by perhaps some 1200 years. Despite this temporal difference, both sites are characterized by the presence of nested plazas that diminish in size and entered through the north. The entry between the slightly larger north plaza and the south plaza is baffled. The center of the north wall has a single entry in its center, which is also baffled. Behind this doorway, further to the south is a small room that reminiscent of the PDSP Complex and adjacent Dais Room. Added to this base of Jatanca-style architecture are typical niched Chimú *audiencias*. As with Changes in the organization of the enclosed north plaza, the addition of *audiencias* within compounds indicates that the Chimú actively reinterpreted and physically modified old architectural ideas. The architectural syncretism found at Pampa Mocan could be viewed as evidence that many key aspects of Jatanca's specific architectural style, at least within the immediate region, had become central material signifiers informing "spatial historiography" and ultimately political legitimization among Chimú and related North Coast elites.

Figure 9.6 – Pampa Mocan (Re-drawn from T. Pozorski 1987)



Finally, all of the compounds within Jatanca are made primarily of tapia. The only exceptions to this general rule are the inclusion of conical adobes – which are found only within the Acropolis and are considered to be typical of Late Formative Period construction (Hecker and Hecker 1990; Ubbelohde-Doering 1966), and large, rectilinear adobes which are found in Compound IV (see also Chapter 6). Since the adobes in Compound IV are found only within a long segment of the southwest wall, it appears as though they were used to repair the structure at some point after initial construction. Given their size and type, it appears as though they were not made by the initial inhabitants of Jatanca, but by either the Moche or Chimú. The dimensions of these bricks are similar to those used in the nearby Chimú/Inca site of Tecapa (see Chapter 3) and therefore, may date to the Late Intermediate Period. Since the site was never reoccupied after being abandoned, it could be argued that the repair to the exterior wall during the Late Intermediate Period represents an act of remembrance on the part of the Chimú who were concerned with preserving a point of great importance within the landscape and politically engineered collective social memory of the Chimú.

It must be made clear that the agency involved in architectural revitalization and/or rejection at Chan Chan (along with Chimú hinterland examples such as Quebrada del Oso – see Keatinge 1982) of architectural forms associated with Jatanca were the outcome of multi-vocal interpretations, constructions, and contestations of the past (Bevan 2006; Connerton 1989; Dobres and Robb 1990; Halbwachs 1992; Hobsbawm and Ranger 1983; Patterson 2004). That is to say, the socially held memories that actively shaped the sociopolitical present, and by extension, the future did not constitute a static complex but was the fluid product of multiple agencies operating at the individual and group level and conditioned by changing cultural and ideological norms (Connerton 1989; Halbwachs 1992). For example, one would be hard-pressed to support the idea that the Chimú understood specific meanings associated with the PRPC during the Late Formative Period. In other words, thirty-five succeeding generations North Coast occupants did not pass down the minutia associated with the ritual activities that had taken place within the PRPC Complex at to eventually be reconstructed at Chan Chan for the purpose of creating a link with the past so as to demonstrate a sense of sociocultural longevity that could ultimately justify the present. To be sure, however, collective memory played a role in the above process as it seems likely that there were shared legends, stories, myths, attitudes, and emotional responses associated with abandoned Formative Period architecture[13] which could be exploited for political advantage (Hobsbawm and Ranger 1983). Therefore, the use of free-standing compound-style architecture along with more specific features such as a modified PRPC by the Chimú were likely decisions made by a narrow segment of Chimor society (perhaps only a few individuals) that revitalized settlement and architectural forms in an effort to manipulate the collective memory of a broader constituency by creating ties to the past,

[13] This is still the case today with regard to Jatanca, which is referred to with near universality by the residents of nearby San Pedro de Lloc as "Pueblo Viejo." This reference reflects the belief that the direct ancestors of San Pedro de Lloc's contemporary population lived within Jatanca at some point in the past.

the appearance of a "tradition," and new social memories that could justify a myriad of fluid, rapidly developing social relationships.

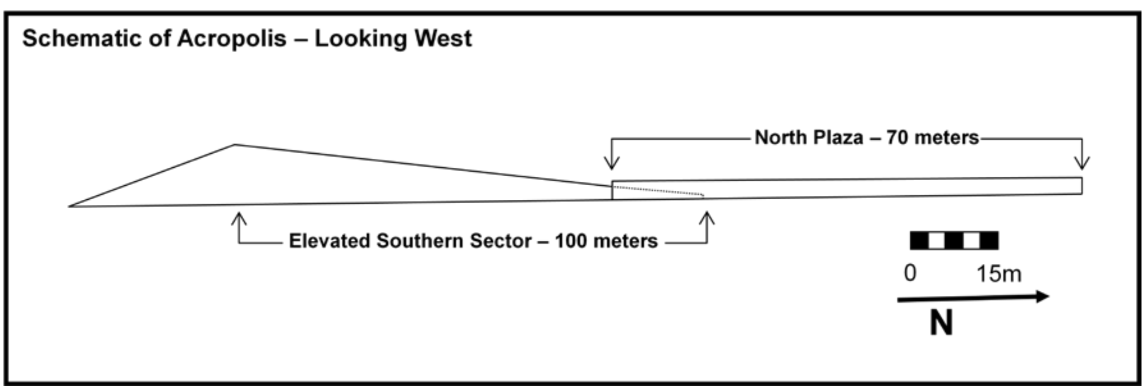
Social Memory and Agency: an Example from Jatanca

There are additional North Coast examples where the architectural past was selectively incorporated or rejected by later groups, which might indicate that this pattern of incorporation/rejection was recurring and perhaps an endemic part of the long-term architectural development of the coast. For example, Jeffrey Quilter (2001) has argued that changes in artistic styles and architecture associated with the Moche (approximately 0-700ACE) were in part a rejection of earlier styles associated with highland Chavín de Huántar. Concentrating on the architectural portion of Quilter's argument, Moche adobe huacas "harked back to earlier traditions" as flat-topped pyramids, first associated with coastal Preceramic groups, were revitalized, while the sunken circular plaza, long associated with the highlands and the immediately preceding Chavín, were rejected (Quilter 2001:31). Artistic renderings associated with Moche monumental architecture may also have displayed evidence of archaism as at the Chicama Valley site of Cao Viejo, some low relief images were executed in a style similar to that associated with the Initial Period (c. 1500-600BCE) site of Garagay (Quilter 2001; see also Franco et al. 1994). The motivations behind these architectural/artistic decisions is murky, but it seems possible that at least some of them may have been initiated by agents attempting to either forge fictitious ties with the distant past, or break from the more immediate past and thereby manipulating social memories so as to alter at least some aspects of group behavior.

The interplay of social memory and agency can perhaps be seen in the architectural forms built within Jatanca as well and may indicate that at least some factions within the incipient residents of the Pampa Mojucape relied upon establishing ties to the immediate past as a means of maintaining social order within the newly settled community. As argued in Chapter 5, the Acropolis appears to be the oldest structure within Jatanca's core, antedating Compounds I-IV by approximately 200-300 years (see also Dillehay and Kolata 2004; Dillehay et al 2004). While the Acropolis and the later compounds share many architectural features, there are some important differences as well, and these may indicate a cultural tie to earlier Middle Jequetepeque Valley groups.

One major difference between the Acropolis and the other compounds within the site is that it is the only structure that has been artificially elevated off of the ground (Figure 9.7); Compounds I-VII were built upon the natural, flat topography of the Pampa Mojucape. The elevated portion of the Acropolis appears to have been formed by stabilizing a barchan dune with a tapia "exoskeleton" (Dillehay et al. 2004; see Chapters 5 and 6). There is also some evidence that chamber-and-fill techniques may have been used – at least around the edges of the structure – in an effort to further stabilize the soft sand of the dune and provide a hard living surface upon which walls could be built (see Chapter 5). Attached to the north of the elevated portion is the PRPC Variant, which as with compounds I-VII was built upon the natural flat topography of the pampa.

Figure 9.7 – Schematic Profile: The Acropolis



Many functional hypotheses can be generated as a means of explaining the unique elevation of the Acropolis's southern sector. For example, it could be argued that the elevation was necessitated by concerns about **privacy and/or security** within the southernmost rooms. However, this does not explain why this concern was addressed via a structural elevation of the entire southern sector as opposed to the construction of a large perimeter wall that permitted only limited internal access as was done for Compounds I-VII. Furthermore, privacy within the southern sector may have been compromised somewhat as the slope actually increases the visibility of some activities to those located in the north plaza, such as the use of hallways to move between rooms.

It could also be argued that the elevation of the Acropolis was an attempt at achieving a **monumental appearance** to those within the associated plaza. This explanation, however, seems somewhat dubious as well. The height of the Acropolis at its southern extreme is approximately 10 meters and the length of the southern sector from the plaza base to the peak is approximately 100 meters, therefore, the slope of this structure can be calculated to just under 6 degrees.

According to Higuchi (1989), however, a slope of six degrees is perceived as a "gentle slope" to someone standing at its base. One can quite literally walk up the northern face of the Acropolis without it ever achieving any kind of a "monumental" aspect. Indeed, if achieving a monumental appearance really was the primary goal of the Acropolis's architects, it is hard to fathom that a six degree slope was the best they could do.

Finally, excavations carried out in 2005, 2007, and 2008 (Warner 2006; Swenson et al. 2008, 2009) within the southern sector of the Acropolis indicate that there is no underlying architecture beneath that associated with the elevated surface (see also Dillehay et al. 2004; Chapter 5). This stands in direct contrast to the mounds that make up the Gallinazo Group in the Viru Valley (see Chapter 2), which show clear evidence of having attained their height via the accumulation of underlying debris and abandoned architecture (Bennett 1950). Instead, excavations within the Acropolis have revealed only a deep layer of sterile aeolian sand (similar to that that of the barchan dunes that currently plague the site) beneath the floors that make up the visible surface (Dillehay et al. 2004). Furthermore, close examination of the exposed, eroded sides of the Acropolis has failed to reveal the presence of any underlying floors within the profile. Therefore, it appears that the elevation of the Acropolis is not the result of any kind of extended tell-like accumulation of debris, but rather the result of a single major construction event that stabilized a large portion of a barchan dune through the utilization of an external casing made of tapia.[14]

Given the shortcomings associated with all of the above functional-based explanations, it could be argued that the elevation of the southern sector of the Acropolis may indicate the presence of a link, or a shared memory between Jatanca's initial settlers and immediately antecedent populations within the Middle Jequetepeque Valley. In this scenario, the initial inhabitants of Jatanca may have constructed a "familiar," elevated terrain, or landscape as the result of an actively constructed, or negotiated social memory that perhaps emphasized the importance of elevation change in processional-based ceremonial and ritual activities (see Chapter 7; see Moore 1996). The incorporation of the elevated sector may also represent an attempt on the part of Jatanca's initial ruling faction to actively manipulate social memory and create the appearance of a middle valley connection so as to "… legitimate their claims by evoking historical depth and continuity" (Patterson 2004).

In order to demonstrate either possibility, it is necessary to examine both the chronology and hillside slope associated with antecedent Middle Valley public architecture (Figure 9.8) that, like the Acropolis, was also the locus of ritual and ceremonial activity (Ravines 1982, 1985; Tellenbach 1986). In compiling this information I relied upon the chronology, architectural descriptions, and topographic maps published by Ravines (1982) who conducted salvage work within a large sector of the Middle Jequetepeque Valley approximately 40 kilometers up-valley from Jatanca. The occupation of the targeted mid-valley sites and associated public architecture date to approximately 1000-500BC, or just prior to the onset of activities at the Acropolis (see Chapter 5). After eliminating all sites that showed significant evidence of Late Intermediate Period remodeling, one is left with a sample of nine.[15] A simple slope angle was then calculated for these nine sites by averaging the elevation change

[14] It should be noted that the core of the Acropolis will be tested during the upcoming 2010 field season.

[15] Site #'s 6.1, 10.4, 10.5, 11.1, 11.2, 12.19, 12.31, 12.34, 13.8 (see Ravines 1982)

between the lowest and highest edge of the architectural complex, which resulted in the following table and graph (Figure 9.9):

Figure 9.8 – Middle Valley Location and Monumental Architecture (redrawn from Ravines 1982)

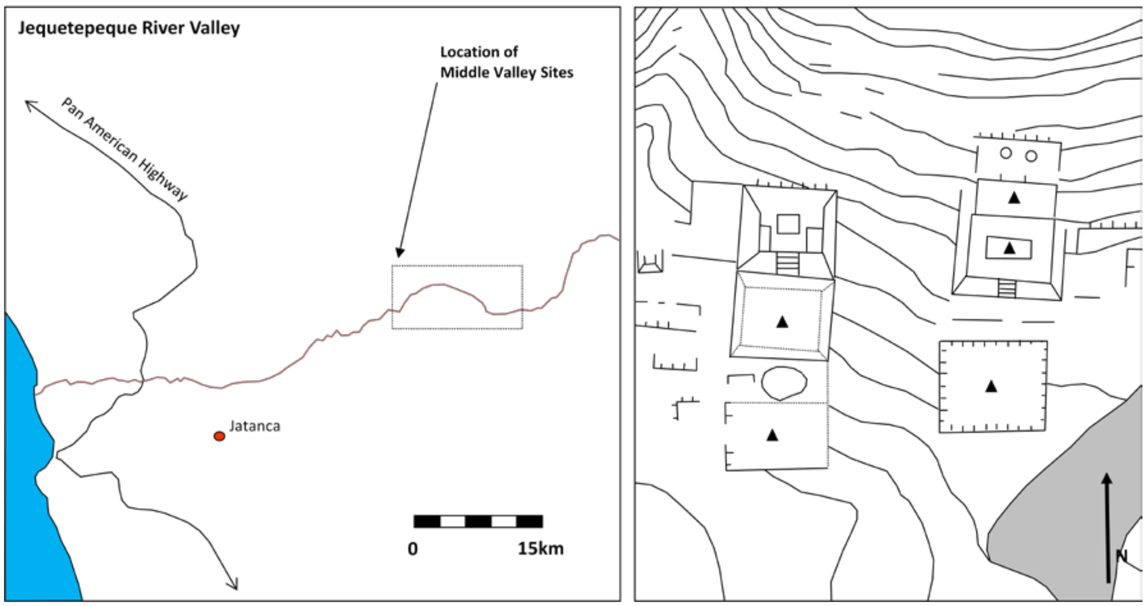
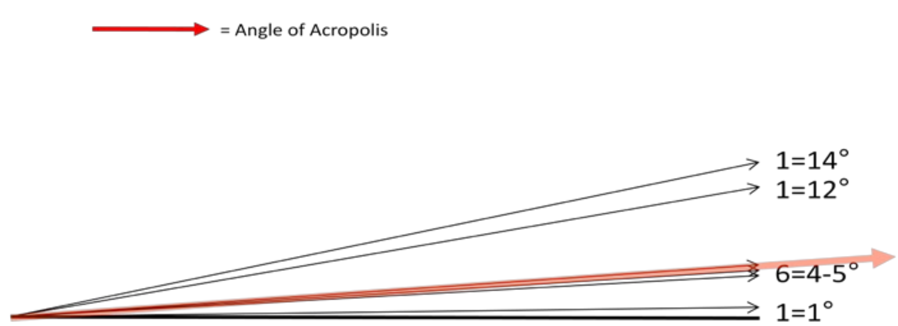


Figure 9.9 – Elevation/Angle of Acropolis

Site #	Slope
6.1	1°
13.8	5°
12.34	4°
12.31	5°
10.4	14°
10.5	12°
12.19	5°
11.2	4°
11.1	4°



In examining the above resulting table and graph, it would appear that the slope of the southern sector of the Acropolis compares favorably with the slopes associated with antecedent ritual architecture found within the Middle Valley, which were located on slopes that ranged between 1 and 14 degrees. Of special interest is the mode of these results which is between 5 and 6 degrees for six of the nine sites within the sample. The fact that the southern sector of the Acropolis is also built upon an artificially constructed 5 degree slope may indicate that the slope was regarded as a necessary component in the physical layout of ritual/ceremonial architecture, perhaps due to the presence of processional-based rituals or ceremonies that required elevational changes as a part of their overall kinetic activity as has been proposed for other Andean mid-valley and coastal sites (Moore 1996). Therefore, when comparing Early Formative Period monumental architecture in the Middle Jequetepeque Valley with the Late Formative Period architecture of Jatanca, the Acropolis appears to be somewhat analogous to a transitional architectural form, combining the earlier, Middle Valley-related slope with later flat-terrain compound construction of the North Coast.

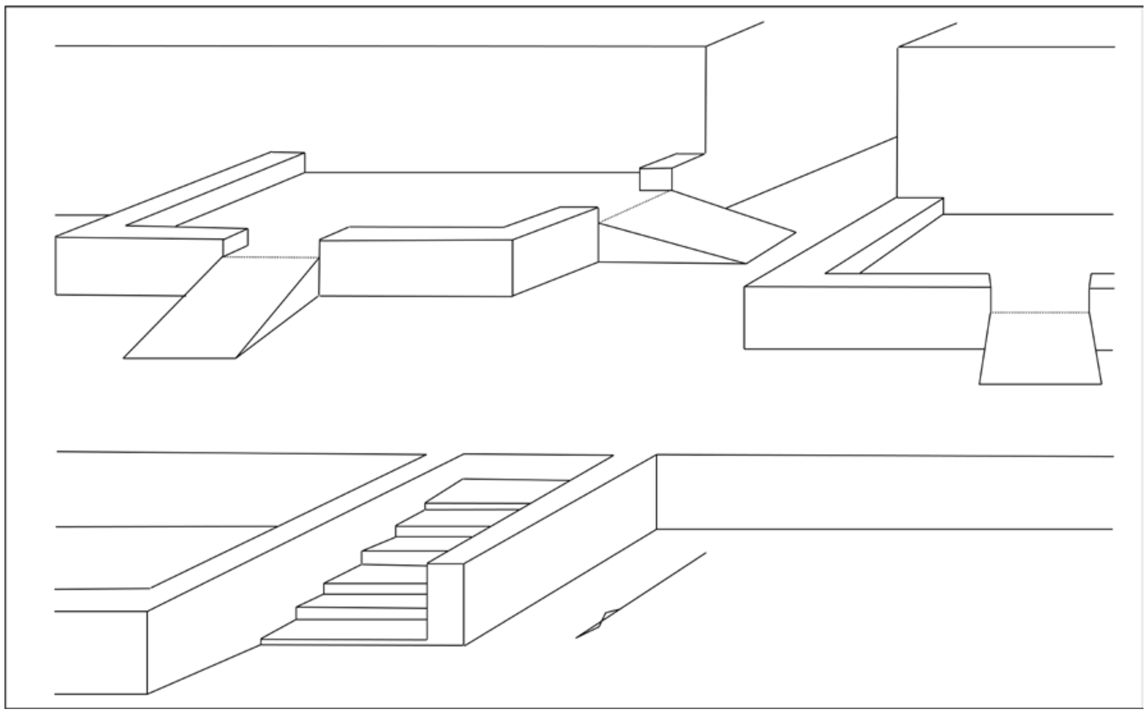
There may be an additional link between the architecture of the Acropolis and that used within the Middle Jequetepeque Valley. As discussed at length in Chapter 6, the PRPC Variant within the Acropolis contains multiple platforms that are serviced via not only a number of ramps, but also by a stairway (Figure 9.10). Stairways, and not ramps, were typically used as a means of negotiating changes in elevation by the earlier Middle Valley sites discussed above (Ravines 1982, 1985), and within other middle Jequetepeque Valley locations such as Monte Grande (Tellenbach 1986) and Kuntar Wasi (Onuki 1994). Stairs were also used by coastal sites whose occupation also antedated that of Jatanca such as Purulén[16] (Alva 1986) and Huaca de los Reyes[17] (Pozorski 1982).

The incorporation of a stairway into the PRPC Variant of the Acropolis can be interpreted in many ways. It could be that stairways were still being used with monumental architecture at the time the Acropolis was initially constructed. However, if that was the case, it still remains unclear as to why the stairway was not replaced with a ramp, which was clearly the feature of choice for negotiating even slight changes in elevation during the construction of Compounds I-IV. It could also be that the stairway

[16] Radiocarbon date = 1415BCE (Alva 1986)
[17] Construction began before 1800BCE (1995)

and platforms were constructed at the same time and in some way reflect dualistic or complimentary principles found within other aspects of Jatanca's architecture such as the layout the ramp/platform room (see Chapter 7).

Figure 9.10 – Isometric of PRPC Variant in Acropolis (Looking North)



It is also possible that the somewhat anomalous placement of this stairway among the ramps within the Acropolis represents an attempt to utilize an important element of antecedent ritual architecture within the then newly-founded Jatanca to demonstrate a tie to the past and/or the Middle Valley region via specific ritual activities. As with the elevation of the southern sector, it is difficult to determine if the use of this feature was the result of the presence of a then-recent link, or shared memory between peoples occupying two regions, or is an attempt on the part of Jatanca's initial ruling faction to actively manipulate social memory and create the appearance of a middle valley connection via architecture and associated rituals in order to legitimate claims of power through the establishment of time-depth and continuity.

As with many other aspects of social memory, human agency, archaism, and monumental architecture, these areas of inquiry must be investigated further.

The meaning of this complex, as with the motivation behind the decision to elevate the southern sector of the acropolis, is difficult to identify. It could be argued, however, that at least part of the motivation was embedded within the need to house processional activities “brought down” by populations from the Middle Jequetepeque Valley that required changes in slope and elevation as part of the physical staging. As time passed and additional compounds were built, the need to incorporate a slope into the southern sector of the compounds was abandoned as the result of the natural negotiation of perhaps competing social memories associated with coastal populations. It is also possible that the incorporation of the elevated sector within the Acropolis was an attempt on the part of Jatanca’s initial ruling faction to actively manipulate social memory and create the appearance of a middle valley connection so as to “… legitimate their claims by evoking historical depth and continuity” (Patterson 2004).

Conclusion

The configuration of compound-style architecture used by the Chimú at sites such as Chan Chan and other hinterland sites such as Pampa Mocan and Quebrada del Oso cannot be explained through overly simplified comparisons with other sites that are either contemporary, or directly antecedent to the Chimú culture, but was instead the result of complex processes that are only now beginning to be examined in detail (Czwarno 1992; Moseley 1990; Moseley and Day 1982). It has been suggested that the transition between the abandonment of Moche sites and the development of the Chimor capital of Chan Chan was a time of turmoil along the North Coast and architectural transition (Bawden 1982, 1996; Moore 1996; Shimada 1994). While some have argued that Wari, or Late Moche sites formed the template for subsequent Chimor architecture at Chan Chan, it could also be argued that urban development along the North Coast of Peru was a pan-coastal process that involved active decisions of architectural acceptance and rejection on the part of the Chimú that incorporated many architectural forms from sites that both antedated the Middle Horizon, and were located outside of the Moche-Chicama heartland. In this scenario, collective social memories associated with the landscape and long-abandoned sites were important factors in determining which architectural types were incorporated and/or rejected within urban Chan Chan.

There are many reasons that certain elements of compound style architecture, as exemplified by Jatanca, may have been seen as desirable to the newly-founded Chimor Empire. For example, the need to establish a sense of stability through a connection with the past was certainly a strong possibility. In addition, the restricted access compound along with its series of internal, nested plazas reflected and further reified the general trajectory of increasing sociopolitical hierarchy within North Coast cultures. The political segmentation of power, as identified by the free-standing, yet internally replicated compounds at Jatanca, can perhaps also be identified at Chan Chan as well. Indeed, if specific rulers (and their lineage) were assigned to each compound within Chan Chan, and the *ciudadelas* were not reused by the heir, this may indicate that the process of succession was a highly contested affair.

This historical link between the past and the then-present could be further projected throughout the North Coast with the construction of numerous additional compound-style edifices that both invoked the stability of the past, and the newly minted power of Chan Chan. Indeed, the adoption of this form may have been especially appealing to the Chimú elite as many of its precise meanings may have become diluted within the diverse social memories of North Coast inhabitants over time, rendering it malleable to reinterpretation, and the formation of new social memories. The architectural de-emphasis of the adobe huaca can also be evaluated through the lens of collective social memory. By de-emphasizing huaca architecture, the Chimú were employing a purposeful strategy of forgetting – in this case they were attempting to sever physical and symbolic connections with a well-known, immediate, shared past that was marked by periods of turmoil, and ultimately the failure of Moche polities. Therefore, in some respects, the architectural configuration that made up urban Chan Chan was the result of both acts of remembering and strategies of forgetting.

Chapter Ten: Conclusion

This dissertation has examined a broad variety of issues related to the Late Formative Period site of Jatanca (Je-205) located within the southern Jequetepeque Valley, Peru (Dillehay et al. 1998, 1999, 2000, 2009; Eling 1986, 1987; Hecker and Hecker 1990; Ubbelohde-Doering 1966; Warner 2006a; 2006b, 2007, 2008, 2010). The various means of investigation utilized during the 2004-2005 field season included regional and architectural mapping, controlled surface collection, and excavation. Architecture served as the primary vehicle by which many aspects of chronology, function, sociopolitical organization, and relationships between Jatanca and additional North Coast sites were explored. For example, the local occupation chronology, patterns of architectural access, relationship between agricultural, political, and ritual activity and architectural configurations, sociopolitical organization, and impact of human agency and social memory on later North Coast urban architectural developments associated with the Chimú were made possible through the theoretical interpretation of data gathered through surface collecting, mapping, and excavation. The value of this work is amplified when one considers how little attention this time period has traditionally received from archaeologists (but see also Millaire 2009) and the multi-stranded developmental pressure to which North Coast archaeological sites are currently subject (see below). Furthermore, Jatanca represents the only large-scale (as measured by architecture) occupation during this period of time within the Pampa Mojucape area, if not the entire Jequetepeque Valley (Dillehay et al. 1998, 1999, 2000 and 2009; Hecker and Hecker 1990). The contributions made by this work can be assessed from a number of cross-cutting perspectives such as improved understanding of Late Formative Period regional development, organization and function of Jatanca's compound architecture, the site's sociopolitical organization, and how Jatanca articulated with other sites, both contemporary and later.

Regional Perspective

Regional maps (see Chapter2 and Chapter 3) indicate that Je-205 is surrounded by an extensive integrated system of relict agricultural fields that drew their water from the now-dry Quebrada Cupisnique and the south side of the Jequetepeque River (Dillehay – personal communication 2010; Dillehay 2004; Dillehay et al. 2004, 2009; Eling 1987; Kosok 1965; see also Chapter 3). Carbon acquired during canal excavation by this project and Proyecto Jequetepeque (Dillehay and Kolata 2004) indicates that at least some of the surrounding canals which likely drew their water from the Quebrada Cupisnique were used contemporaneously with Jatanca's Late Formative Period occupation (see Chapter 5). The location of Jatanca within this extensive irrigation system likely underscores the high degree to which the subsistence economy of the site was focused upon agricultural production, substantiating models that argue there was a significant shift in regional settlement patterns based upon the development of, and an increased reliance upon irrigation agriculture within North Coast valleys during the Formative Period as identified by others (Moseley 1975, 1985; Willey and Ford 1949; Willey 1953; Wilson 1988; but see also Pozorski and Pozorski 1987). Within the southern Jequetepeque Valley, this settlement shift occurred at some point during the Cupisnique occupation of the nearby coastal site of Puemape, which was evidently abandoned at approximately the same time that activity at the Acropolis began (Elera 1998; see also Chapter 2, 3, and 4, and 5). However, as Chapter 9 demonstrates, there may have been an additional down-valley shift in settlement occupation from the Tembledera region (see Dillehay et al. 2009) as evidenced by the elevated southern sector of the Acropolis along with the use of stairways and ramps within of the north plaza, in an effort to exploit readily available land amenable to irrigation agriculture.

It is of interest to note that on the Pampa Mojucape, with the establishment of Jatanca, there was a general trend for subsequent occupations to move toward the north as later sites such as Huaca Colorada (Late Moche- Early Intermediate Period) and Tecapa (Chimú/Chimú-Inca – Late Intermediate Period/Late Horizon) are located approximately 2 kilometers to the north of Jatanca (Dillehay et al. 1998, 1999, 2000, 2009). This general movement toward Cerro Santonte likely substantiates earlier work conducted by Ubbelohde-Doering (1966), Eling (1986, 1987), and Dillehay and Kolata (2004) who argued that the periodic encroachment of barchan dunes and the likely drying up of the Quebrada Cupisnique may have been at least partially responsible for the creation of a regional "horizontal stratigraphy" resulting ultimately in the periodic abandonment of irrigation activity within the Pampa Mojucape at some point just after Old World contact. Furthermore, this oscillating pattern of local occupation likely impacted canal development on the pampa as well. If the Quebrada Cupisnique was carrying water prior to and during the occupation of Jatanca (Dillehay – personal communication 2010), this would explain Jatanca's more southerly location; this area was down-slope from and close to the land adjacent the now-dry river (Dillehay – personal communication 2010). During the later Moche and Chimú occupations, the Quebrada Cupisnique was dry; the result being that water had to first pass through a narrow *portachuelo* before emptying onto the Pampa Mojucape. By locating the sites of Huaca Colorada and Tecapa within the northern section of the pampa near the exit point of the *portachuelo*, residents were able to have control over the critical juncture in which water entered the pampa (see also maps in Dillehay et al. 2009; Eling 1987).

Maps created by this project (see Chapter 3) also substantiate a hypothesis developed initially by Dillehay and Kolata (2004) who argued that the regional development of redundant, parallel canal systems on the Pampa Mojucape are "anticipatory infrastructure" that could be mobilized during peak periods of dune activity. As dunes passed through the area, redundant components such as main-line canals and feeder canals could be shut off or brought on-line as needed, thereby somewhat negating disruptions in agricultural production by the movement of dunes (Dillehay and Kolata 2004). Therefore, in a sense, these redundant canal systems may represent the result of a kind of "cost-benefit analysis" where it was determined that the added labor expenditure associated with building and maintaining added canals was offset by the benefits derived during ENSO events or fluctuations in dunation activity (see also Chapter 3).

While the results of this survey (Proyecto Jatanca) identified Jatanca as the only Late Formative Period settlement within the Pampa Mojucape, Pampa del Guereque, and Pampa de Pitura region, some 13 additional Formative Period sites have been located within the broader Jequetepeque Valley region (Dillehay et al. 1998, 1999, 2000, 2001; Dillehay et al. 2009). Based upon the presence of Gallinazo sherds that indicate a contemporary relationship between these sites and Je-205, these comparatively small sites may have been of importance to Jatanca for a number of reasons such as having been the source of at least some of the early littoral populations, and/or having provided Jatanca with ready access to raw materials such as reeds and marine resources. While the exact relationship between Jatanca and satellite sites is currently unknown, it is possible that Jatanca also functioned as a regional administrative center that may have organized activities within these satellite centers and/or broader interaction (Dillehay et al. 2009).

In addition to examining the relationship between Jatanca and the Pampa Mojucape area, it is of no small interest to consider how Jatanca articulates with more geographically extensive models of North Coast cultural development – especially as related to the traditionally-identified Gallinazo culture best-associated with the Virú Valley. For years, scholars regarded the Gallinazo as a direct antecedent or antecedent/contemporary culture to the Moche of the early Intermediate Period (Bennett 1950; Collier 1955; Ford and Willey 1949; Moseley 2001; Shimada 1994; Strong and Evans 1952; Willey 1953). Gallinazo sites, especially within the Virú Valley, were identified by the presence of material culture such as large adobe huacas (Willey 1953) and specific ceramic types that included Negative Resist wares and domestic wares such as Castillo Incised and Castillo Modeled (Bennett 1939, 1950; Collier 1955; Ford and Willey 1949; Strong and Evans 1952; see also Chapter 4). It was initially argued that domestic ceramics were an adequate archaeological indicator of a Gallinazo presence, component, or site. Furthermore, since Reduced Wares were generally found in association with domestic wares such as Castillo Incised and Castillo Modeled, the presence of the latter two forms even in the absence of Reduced Wares was considered to be sufficient markers of the Gallinazo culture – even outside of the Virú Valley.

Recent works by Millaire (2009), Donnan (2009), and Attarian (2009) among others (see Millaire and Morlion 2009) have argued persuasively that North Coast domestic wares such as Castillo Modeled and Castillo Incised were not necessarily Gallinazo-specific. In fact, it appears as though design elements and forms related to Formative Period domestic ceramics were shared and used by a pan-North Coast "cultural substrate" that adhered to common aesthetic tastes (Donnan 2009; Millaire 2009). In this model, Reduced Wares and Moche fine wares (i.e. stirrup spout vessels, portrait vessels, finelines etc….) served as signifiers of "corporate affiliation." In other words, while domestic wares such as Castillo Modeled and Castillo Incised were of little to no value in terms of specific cultural identification or affiliation, so-called elite wares were. With regard to the Gallinazo, Negative Resist wares could be used to identify a "Gallinazo presence," although the specificity and implications of the term varies among those who work in this time period (see Kaulicke 2009).

Beyond just the identification of Gallinazo sites, this new paradigm has had a profound effect upon our understanding of the sociopolitical development and organization of the North Coast during the transition between the terminal Formative Period and the incipient stages of the Early intermediate Period (approximately 200BC-AD100) – a time period along the North Coast for which very little is known (Kaulicke 2009). Indeed, Peter Kaulicke (2009:239) has stated that the period of time from the first century BC to the second century AD is:

> "… practically unknown in many valleys … (and is) defined by a number of cultures, on a diversified Formative background, with clear evidence of social complexity. The ethnogenesis of Gallinazo, Salinar, and highland societies (Layzon, Huaraz) should be defined on the basis of material evidence from this phase."

Given Jatanca's chronological position within the development of North Coast culture, it is of interest to examine it in terms of what it can tell archaeologists about contemporary and later regional developments as argued above by Kaulicke (2009). Certainly it could be argued that the complex, replicated architectural configuration of the site supports the idea that North Coast sites during this time of transition were characterized by "…clear evidence of social complexity" (see Chapters 7 and 8). In fact, material culture at Je-205 related to the irrigated landscape, replicated compound form, and arrangement of interior features argue for the presence of an elite faction, large-scale, complex ritual activity, centrally organized labor, and perhaps incipient social tensions associated with the development of an increasingly centralized form of political organization (see Bawden 1996; see Chapters 7 and 8). In addition, the architectural uniqueness of Jatanca when compared to other Jequetepeque valley sites, or Formative Period sites from other valleys such as Mocollope in the nearby Chicama Valley (Attarian 2009), or those from the Casma Valley (S. Pozorski and T. Pozorski 1987), also underscore Kaulicke's point regarding the generally "diversified" nature of Formative Period sites.

For example, one of the few scholars currently working within the same terminal Formative Period time frame associated with Jatanca's occupation is Chris Attarian (2009) who has conducted work within the Chicama Valley at the site of Mocollope. Attarian noted that between 200BC and AD200, Mocollope underwent a process of urbanization (but see also Uceda et al. 2009) that resulted in settlement nucleation and ethnogenesis that ultimately created a new community identity. It appears as though much of this demographic change was the result of the migratory activity of people who had been living within small villages located in Mocollope's hinterland (Attarian 2009). What is especially intriguing about this is the fact that similar sociopolitical, ethnogenetic, and settlement/landscape processes do not appear to have taken place between Jatanca and other contemporary, local sites on this same regional scale with the same dramatic changes despite the somewhat shared proximity of the two sites in terms of both time and space. This fact, may underscore the degree to which the sociopolitical and cultural developments of each North Coast valley were unique and complex events. However, there is some limited architectural and settlement pattern evidence that the initial construction of Jatanca may have been the product of at least some individuals moving down–valley from the Tembledera region of the Jequetepeque Valley (see Ravines 1982; Chapter 9) along with displaced populations from the Puemape area (Elera 1998). Nonetheless, these important changes in settlement do not appear to have resulted in an ethnogenesis as described by Attarian at Mocollope.

Christoph Makowski (2009) also agrees with Donnan (2009) and Millaire (2009) with regard to the Norcosteño model of cultural development along the North Coast. However, within this framework of a shared ethnic substrate, Makowski argues that the widespread distribution of Reduced Wares indicates that a "warrior People" associated with what he terms the "Virú-Gallinazo" conquered the north coast during the 2nd century AD (see also Fogel 1993; but see also Kaulicke 2009). It would seem that the ceramic evidence at Jatanca (i.e. the presence of negative resist wares *prior* to the 2nd Century AD; the consistent, unaltered use of compound architecture; the lack of an adobe huaca, etc…) might undermine such a hypothesis. Indeed, that there was any kind of an external impetus from the Virú Valley region related to the development of Jatanca – especially from an architectural point of view – it has yet to be identified. Based upon the data presented in this dissertation and despite the potential viability of the *Norcosteño* ethnic substrate which indicates a degree of inter-valley cultural contact (see Millaire 2009), the development of Jatanca on the Pampa Mojucape appears to have been largely the result of intra-Jequetepeque Valley processes and socio-cultural dynamics that may have been initiated by a desire to irrigate and farm the Pampa Mojucape from water initially drawn from the now dry Quebrada Cupisnique (Dillehay – Personal communication 2010). That there was any kind of an external Chicama or Virú Valley sociopolitical influence at Jatanca or that the site was part of a Gallinazo state seems highly unlikely. In fact, in terms of sociopolitical organization, it seems unlikely that Jatanca could have ever achieved a level of sociopolitical organization much beyond that of a "paramount chiefdom" that was of a generally segmented nature as evidenced by the consistent replication of Compound forms as found especially in Compounds I-IV.

The sociopolitical organization of Jatanca was also examined at the valley-specific level. Based upon the presence of additional, smaller, Formative Period sites within diverse environmental locations of the Jequetepeque Valley (Dillehay et al. 2009), Jatanca may have been the organizing center of a system that permitted the acquisition of raw resources needed for the construction and maintenance of Jatanca. For example, the presence of Formative Period sites near standing bodies of water within which grow thick stands of reeds that could have been used to construct roofs has been noted by Dillehay and Kolata (Dillehay et al. 2009). Additional Formative Period sites, located near the ocean, could have provided marine resources for Jatanca as well (Dillehay et al. 2009). Therefore, it is possible that Jatanca served as a local administrative center that functioned not only to oversee agricultural production, but also to organize relations of exchange with other smaller sites. The exact nature of these broader relationships, and specific Formative Period chronology (see Millaire 2009; Donnan 2009) has as of yet, however, to be determined.

The above discussion underscores the need for North Coast archaeologist to continue to refine and correlate ceramic chronologies along the coast. Indeed, as argued in Chapter 4, while it appears as though the *Norcosteño* model may be correct in that ceramic types were shared among many valleys for an extended, perhaps unusually, long period of time, temporal and/or site-specific differences in domestic wares clearly exist as evidenced by the lack of face neck jars and figurines in Jatanca.

In addition, North Coast archaeologists need to continue to examine incipient processes of urban development. Too often, work on urban processes tends to focus upon either the penultimate moments just prior to the development of urban conditions and/or examines sites that have already achieved "urban" status. In fact, as this dissertation has demonstrated, the roots of some aspects of urbanism can be found deep within the past as was demonstrated in chapter 9 where it was argued that at least some architectural canons of late Formative Period compounds may have been reinterpreted and incorporated into the urban site of Chan Chan along with other examples of Chimú compound architecture (such as Quebrada del Oso) as a means of creating a link to the past that could be exploited for political purposes.

The Compound Architecture

Excavations undertaken by this project provided critical insight into the architectural development of Je-205. Radiocarbon dates collected from intact archaeological context (primarily between and within floors) indicated that while most of the major compounds that make up the architectural core of the site were constructed and used contemporaneously, the Acropolis may have been the first major architectural construction project within the site, antedating the others by as much as three hundred years (see Chapters 5 and 6). Yet it appears as though most structures (Acropolis and Compounds I-IV) overlap in use and occupation to the Late-terminal Formative Period. Unlike the compounds that make up the architectural core of the Gallinazo Group, it would appear that few people actually lived within the compounds and that the bulk of the site's support population lived instead within a concentric circle surrounding the site as evidenced by the remaining dense accumulation of ceramic and lithic debris. Ultimately, ceramic and radiocarbon data indicate that the site was abandoned no later than approximately AD200 and was not reoccupied or altered significantly by subsequent local culture groups such as the Moche or Chimú, despite both cultures establishing a robust presence within the Pampa Mojucape area as evidenced by sites such as Huaca Colorada and Tecapa (Dillehay et al. 1998, 1999, 2000, 2004, 2009; Dillehay and Kolata 2004; Eling 1987; Hecker and Hecker 1990; Swenson et al. 2009, 2010).

Compound floors tended to be well-constructed of relatively fine material that was generally free of any major inclusions beyond small bits of gravel. The similarity in both texture and color between the matrix found in the adjacent canals and the floors (along with results of ethnobotanical analysis – see Vasquez and Tham 2006; see also Chapter 5), may indicate that sediments from the surrounding canals were used in construction of at least some of the floors, further implying that some construction episodes were tied into the local agricultural cycle of the pampa.

The presence of floor wear, wholesale re-flooring episodes, and periodic patching indicate that floors within the Jatanca compounds were well-used and kept clean resulting in the recovery of very few artifacts during excavation (see Chapter 5). The general lack of deep layers of wind-blown sand between floors and fill levels substantiate radiocarbon and ceramic data and indicate the relatively continuous occupation and lack of significant post-abandonment reoccupation by later groups such as the Moche, Lambayeque, or Chimú within Je-205 (see Chapters 4, 5, and 6). In addition, very few internal features such as benches, hearths, postholes, or *depositos* were encountered during excavation (or mapping) making it difficult to determine room, or rooms-specific function(s). Indeed, there appears to be no clear-cut evidence that activities related to large-scale mortuary, craft or *chicha* production, centralized storage, or domestic residence were undertaken within the compounds or played a significant role in determining the overall compound design (see Chapter 6), despite the fact that these activities are easily identified within the architectural configuration of the nearby Moche site of Huaca Colorada (Swenson et al. 2009, 2010). However, excavation within unit number C1-U1 located within a relatively "private" portion of the compound did reveal that at least some domestic occupation and/or activity took place within Compound I. None of the additional excavation units within the Acropolis, Compounds II, IV, or VII provided similar, unequivocal evidence, with the possible exception of unit CIII-U1, which is also located within a relatively restricted, or "private," sector of the compound and in close proximity to the PDSP Complex (see also Swenson et al. 2009). Therefore, it is possible that the housing of some individuals of perhaps a more privileged status than those who occupied the large concentric space surrounding the compounds was one compound function, albeit a relatively minor one when compared to that of political and ritual activity (see Chapter 7).

Based upon analogous architectural data from other North Coast sites (Feldman 1985, 1988; Pozorski 1982; Quilter 2001) and artifact-based data from Pacatnamú

(Donnan and Cock 1986) and Chan Chan (Moore 2006a, 2006b; Uceda 1999) it would appear that a major function of the compounds was to host political and ritual events of varying size within the replicated Plaza/Ramp/Platform Complexes (or PRPCs) and Plaza/Dais/Stair/Platform Complexes (or PDSP Complexes). Performance theory (Inomata and Coben 2006) and proxemics (Hall 1959, 1966; see also Moore 1996a, 1996b; Rapoport 1982; Tuan 1974, 1977) elucidated how the PRPC form was designed to aid in symbolic transfer during political and ritual events between parties within the complex. More specifically, proxemics along with prehistoric representations of ritual activity were used to argue that the staging of ceremonial events within the Primary PRPC may have relied upon spectacular displays, dramatic gestures, music, and drumming as a means of aiding symbolic transfer within the large complex. More subtle forms of communication (i.e. facial expressions, normal speaking voice, etc…) could be used within smaller areas such as the PRPC Variant within Compound I, the Stair/Ramp Room in Compound II, or the PDPS Complexes in Compound III and V, all of which were probably entered only by small groups of privileged people (see Hall 1959, 1966; Moore 1996a, 1996b). Whatever the scale of the secular and sacred activity, Jatanca's compounds were designed at least in part to provide a setting, or backdrop within which preparations could be made, and these activities could be held.

Access patterns within the compounds were also analyzed and resulted in the recognition of many interesting patterns that provided insight into a myriad of sociopolitical issues. For example, within Jatanca's compounds there appears to have been a potential "favoritism" or "privileging" of right-hand routes of internal access over other routes, as has been noted at the sites of Pacatnamú and Chan Chan (Donnan and Cock 1986; Moore 1996; see also Chapter 6). As was argued in Chapter 9, the presence of this access pattern at Jatanca hundreds of years prior to similar architectural developments at Chan Chan or Pacatnamú can be used to substantiate the position that these later sites drew from many previous architectural forms. This was perhaps done so as to create direct and perhaps even mythical ties with the past in an effort to present the appearance of sociopolitical time depth and stability via the exploitation of the landscape of shared memories. Ultimately, the active use and revitalization of past architectural forms might account for the reemergence of right-hand privileging of access patterns within the Late Intermediate Period centers – especially in light of the fact that this architectural preference does not appear to have been employed by the intervening Moche (see Bevan 2006; Quilter 2001). In addition, *beta* and *gamma* analysis identified a general pattern of restricted access within all of the major compounds and might indicate the presence of segmented hierarchical sociopolitical ordering among the constituents of Je-205. Minimally, this ordering would have permitted some residents to have greater internal compound access than others and may further substantiate that the need to physically separate at least some members of broader North Coast society has a long history within the Peruvian North Coast area (Moore 1996).

Sociopolitical Organization of Jatanca

The sociopolitical organization of Jatanca was also examined via an analysis of the architectural core, especially with regard to the internal layout of the compounds. This analysis resulted in the identification of potential hierarchical differences in status among the social segments that formed the population of Jatanca based upon the presence of access patterns that provide increasingly restricted entry into increasingly smaller areas of ritual activity (see Chapters 6, 7, and 8). For example, Compounds I - IV have at least two nested ritual areas including the Primary PRPC (the largest and most-easily accessed ritual area and an additional, smaller ritual area that can be accessed only after first passing through the PRPC, which might imply that there were at least two readily identifiable status group divisions - those permitted entry into inner compound areas and those that were not. However, it must be made clear that the possibility exists that social status within Jatanca was far more nuanced than just a simple dichotomy (see Chapter 7 and Chapter 8). In addition, restricted compound access, coupled with the pattern of increasingly nested ritual/political areas that diminished in size may substantiate the argument that maintaining status differences through architectural configuration among at least some segments of society among North Coast inhabitants may have originated long ago (Moore 1996; Means 1931) and was perpetuated through time at other Jequetepeque Valley sites such as Farfan, (Mackey 2006; Keatinge and Conrad 1983), Cabur (Sapp 2002), Tecapa (Ubbelohde-Doering 1966; see Warner 2006 for plan), and Pacatnamú (Donnan and Cock 1986, 1997; Hecker and Hecker 1982).

The labor organization necessary to construct Jatanca was examined via a comparison with better-known, later organizational systems associated with North Coast cultures such as the Moche (Hastings and Moseley 1975; Moseley 1975) and the Chimú (Day 1982; Conklin 1990). Based partially upon the presence of segmented tapia construction and corresponding lack of makers' marks or other means of identifying the completion of labor obligations, it has been argued that the large-scale labor marshaled at Jatanca for the purpose of compound construction was not necessarily organized in a strictly hierarchical, or "corporate," fashion as was likely the case at Huaca del Sol and Huaca de la Luna (Bawden 1996; Moseley 1975). Instead, group labor projects at Jatanca were probably managed via a more fluid, or situational lineage-based social units (or "segmented") with internal divisions, perhaps somewhat similar to the later *ayllu* form of sociopolitical organization (Burger 1985, 1992, 1995; Isbell 1997).

It is possible that the presence of dualistic principles of organization extended to social organization among Jatanca's constituents and can be identified via the distribution of architectural features that make up the Plaza/Ramp/Platform Complex. Within Compounds I-IV there are two ramp/platform features that face each other in mirror opposition and are separated by the central north-south axis that runs through the approximate center of this room. If the concept of duality did exist during the Late Formative Period, the PRPC would seem to be a likely place within which politics and rituals associated with duality could be performed. Ritual and political activities conducted within these spaces could have functioned minimally to reaffirm sociopolitical ties and provide a sense of group collectivity – perhaps somewhat paradoxically in the face of ever increasing social divisions.

Spatially, the Primary PRPC somewhat paradoxically embodies potential power symmetries and power asymmetries found within the group. If one divides the complex along its north-south central axis, the right and left-hand side are relatively "equal," as both are composed of the same approximate amount of space and contain a ramp/platform feature that visually anchors the space. However, if the Primary PRPC is visually divided along the east-west retaining wall that separates and defines the plaza from the ramp/platform room, then the same space can be viewed as reifying the emerging power differences that also formed a part of the cultural substrate of Jatanca's constituency (see Chapters 6, 7 and 8). Then, in both physical and symbolic sense, the Primary PRPC can be viewed as a space within which fluid sociopolitical power relations could be potentially contested, negotiated, and reified during group activities of both a secular and sacred nature (see Bawden 1996).

It was also argued that at the level of the site, Jatanca could have been further organized sociopolitically along quadripartite lines, or divisions of ranked dual opposition (see Netherly and Dillehay 1986), with the constituents of each compound linked in binary opposition to those of a "sister" compound (i.e. a dyadic unit composed of Compound I and Compound II, and Compound III and Compound IV). Bearing this hypothesis in mind, the canals that run through the site and separate the compounds can also be viewed as symbolic divides, or *chaupi* (see Netherly and Dillehay 1986). If this hypothesis is correct, the canals that divide the Pampa Mojucape may have designated specific plots of land assigned to each quadripartite social division/compound.

While it is highly speculative, it is possible that the combination of replicated PRPCs within Compounds I-IV, and the opposing platforms within the PRPC Variant of the Acropolis may provide additional evidence indicating the use of ranked dual opposition and/or a quadripartite sociopolitical division within Jatanca (Chapter 8). In this scenario, each compound was socially composed of two lineages linked in ranked dual opposition. Each compound was then linked with a sister compound, also in a system of segmented, ranked dual opposition. Ultimately, each of these units was also united via a similar relationship. While many ritual and political events were held within the PRPCs of the individual compounds, there may have been site-wide events that brought the entire community (or representatives from each of the four compounds) together which were held within the unique spatial configuration of the PRPC Variant of the Acropolis. Since the eastern ramp/platform feature within the Acropolis is much larger and more “elaborate” than its western counterpart, it could be argued that the difference in platform size is related to “an internal expression of ranked dual opposition” and the presence of a “superior authority” between dyadic groupings (Netherly and Dillehay 1986). If this is correct, then north-south axis created by the south wall entrance into the elevated portion of the Acropolis, the stairway onto the lower platform, and the northern plaza entry may also have served as more than just a visual axis, but also as a proto-*chaupi* that symbolically and physically divided the site into unequal social divisions united within the unifying confines of the enclosed plaza.

Finally, that Compounds I-IV are free-standing and replicated both in terms of their external form and internal configuration, may imply the presence of a segmented form of broader, site-wide sociopolitical organization, with each compound holding domain over a variety of individual, shared, and nested issues. Within this scheme, some sociopolitical issues were decided at the level of the compound by the ranked dual lineages associated with each compound while others, such as those revolving around the organization of agricultural activities – especially canal maintenance - were decided among members from all four compounds.

The Politics of Memory and Social Change

Among the many architectural canons drawn upon by the builders of Chan Chan were those of Jatanca and other earlier compound-based North Coast sites. More specifically, invoking the theories related to social memory (Connerton 1986; see also Halbwachs 1992) and human agency (Dobres and Robb 2000), this work argues that urban development along the North Coast of Peru was a complex pan-coastal process that involved active decisions of architectural acceptance (acts of remembering) and rejection (strategies of forgetting) made via human agency that selectively incorporated many earlier architectural canons from sites long-abandoned into monumental architecture in an attempt to manipulate group behavior via the creation of ties with the distant past and create new communities (Bevan 2006; Yoffee 2007). These visual ties were likely intended to demonstrate cultural longevity, or "naturalness," that could be extended into the then-present sociopolitical organization of newly forming Chimú communities, thereby selectively creating newly-negotiated social memories and perhaps reinforcing emerging sociopolitical hierarchies as well (Hobsbawm and Ranger 1983; Patterson 2004; Yoffee 2007). In the specific case of the Late Intermediate Period urban site of Chan Chan along with smaller rural administrative compounds, it was suggested that key architectural forms from sites that both antedated the Middle Horizon/Late Intermediate Period, and were located outside of the Moche-Chicama heartland (such as Jatanca and the Casma Valley) were incorporated into the constructed world of the Chimor kingdom in a partial effort to establish a sense of stability during a turbulent time through a connection with the distant past (see Chapter 9). In this case, compound architecture, the use of nested ritual spaces (a slightly modified Plaza/Ramp/Platform Complex), and perhaps a favoring of right-hand interior access were revitalized by the nascent Chimú as an active strategy of sociopolitical management and were used as a means of justifying, ordering, and/or explaining the then-present via "ancient" ties to a perhaps "mythical" or "idealized" past (see Hobsbawm and Ranger 1983; Patterson 2004; Yoffee ed. 2007). Indeed, the adoption of these previously-abandoned architectural forms may have been especially appealing to the Chimú elite as many of their precise meanings may have become diluted within the diverse, multi-stranded social memories of North Coast inhabitants over time, rendering them readily malleable to reinterpretation, and the rapid formation of new social memories that justified rapidly changing social relationships during the early Late Intermediate Period (see Hobsbawm and Ranger 1983; Patterson 2004; Van Dyke 2007).

The architectural de-emphasis of the adobe huaca by the Chimú can also be evaluated through the lens of collective memory combined with agency. During the

Early Intermediate Period (EIP), the Moche elevated the use of the adobe-constructed huaca to previously unmatched heights (Bawden 1996; Shimada 1994; Uceda 2001). Within the Moche heartland this architectural form was the visual centerpiece and likely came to symbolize sites such as Sol/Luna (Moseley 1975; Uceda 2001) and Cao Viejo (Gálvez and Briceño 2001). By de-emphasizing huaca architecture, segments of the emerging Chimú society were employing a purposeful strategy of forgetting – in this case they were attempting to physically sever physical, psychological, and symbolic connections with an immediate, well-known, shared past that was marked by periods of turmoil, and ultimately the failure and disintegration of Moche polities. As a result, monumental architecture took on a horizontal, as opposed to vertical quality – much like that associated with long-abandoned Formative Period sites. By invoking a historical and cultural link with these sites via architectural mimesis, and the incorporation of new elements such as burial mounds within the compound interior, new communities composed of emerging social memories, traditions, and associated behaviors could be rapidly created by incipient Chimú leaders within a fluid cultural matrix and exploited for political gain. Therefore, in at least some respects, the architectural configuration that was used in the construction of urban Chan Chan may have been the result of both selective acts of remembering and strategies of forgetting (Bevan 2006).

Jatanca and North Coast Urban Development

Based upon the various criteria used historically to establish the presence of prehistoric "urban" conditions discussed in Chapter 2, it seems clear that Jatanca was never in and of itself an urban site. Criteria typically used in establishing urban conditions such as population thresholds, complex systems of economic exchange, entrenched hierarchies of sociopolitical status, ethnic diversity, monumental architecture, and centralized political control cannot be identified within Jatanca. Based upon the data generated by this study, Jatanca was a relatively small site, inhabited by perhaps a few thousand people at any given time, most of whom were full-time farmers. The presence of significant craft or long-distance trade specialization at any level of organization has yet to be identified. While the nested nature of Jatanca's PRPCs likely indicates the presence of social divisions based on increasingly restricted access, there is little additional evidence of social differentiation based upon either the ceramic or mortuary data acquired to date, although there were likely to have been political/ritual specialists as evidenced by the PRPCs. Indeed, other than the location, even the domestic unit found within Compound I/Unit #1 does not hint at any kind of significant social divisions within the site as it contained only a simple hearth, bench, and *deposito*.

Despite its decidedly "non-urban" appearance, Jatanca and other Formative Period sites probably played an important role in the development of later urban architectural canons located throughout the North Coast of Peru as evidenced by the architectural mimesis employed in later Chimú compounds at sites such as Quebrada del Oso, Pampa Mocan, and especially Chan Chan. In this sense, despite having been separated by hundreds of years in terms of occupation, Formative Period sites played an active role in shaping the Late Intermediate Period urban settlements and compounds. Architectural forms of old, long abandoned within the landscape, were reinterpreted by emerging Chimú elite and revitalized on a scale far-more grand than could have been imagined by the original architects and laborers responsible for the much-smaller Formative Period buildings.

In looking at the long-term development of urban living conditions along the North Coast, data from Jatanca is especially informative. Prior to the development of Formative Period compound style architecture, many coastal sites were organized around massive mound constructions made of stone and earth. During the post-Formative Period, Early Intermediate Period sites were once again organized around mounds, in this case composed largely of adobe, although some chamber-and-fill variations have also been noted. During the Late Intermediate Period, Mound-based monumental constructions were once again rejected in favor of compound-style forms that served not only as the physical loci of power, but as an obvious symbol of Chimú hegemony. This cyclical sequence of monumental architectural rejection, reinvention, reinterpretation, and reincorporation demonstrates that North Coast urbanism cannot be understood as a simple sociopolitical and/or economic process or process with a determinative telos. Indeed, the total process was clearly much "messier," with the past, real or imagined, playing a critical role in long-term urban formation – especially as related to monumental architecture.

In addition, data from Jatanca may also shed light upon the potentially important role played by ritual in the formation of urban conditions. While determining compound function was hampered by a general lack of artifacts and constructed features, that the compounds were used as a setting or backdrop for large-scale ritual and political activity can be argued based upon the distribution of replicated space/features that would have enabled the effective transfer of ritually-charged information (see Chapter 7). While likely also used for political activity as well, Primary and Secondary PRPCs, PDSPs, and Stair/Ramp Complexes, filled with ramps and platforms within strategically located areas of the plazas, allude to the likely-importance of ritual activities to those living within and around Jatanca. Indeed, in many cases these complexes take up far-more than 30% of the total compound area, and in two cases, Compound III and Compound IV, more than 50% (see Chapter 7). While many models of urban development emphasize material factors such as the economy or warfare in urban formation processes, along the North Coast, ideological factors, perhaps in the form of ritual activity, including the shared need to come together for ritual events of varying scales, may have also played an equal if not greater role as well. To be sure, I am not discounting material factors, but wish to highlight that they were embedded in ceremonial constructions of the world. Indeed, the technology of production was inherently ritualized in the prehistoric Andes, as it was elsewhere. Therefore, production, consumption, distribution, and exchange were not simply legitimated by the symbolism encoded by the built environment but were in truth enabled by the ideologies of memory materialized in monumental landscapes such as Jatanca. In this sense, data from Jatanca underscore the need for archaeologists to continue to move beyond the use of artificial hierarchical constructions of infrastructure determining superstructure, and highlight the importance of space and memory in urban development.

Future Directions in Research

Work at Jatanca has continued since the 2004/2005 field season. In 2007, Proyecto Jatanca/Huaca Colorada was initiated by Edward R. Swenson, John P. Warner, and Jorge Chiguala-Azabache. This multi-year project was designed to continue work initiated by Warner and better-understand the sociopolitical and ritual activity that was instrumental in shaping the Jatanca compounds, and the nearby Moche site of Huaca Colorada (Swenson, Chiguala, and Warner 2008, 2009, 2010). Methodologically, this subsequent work has focused primarily upon large-scale, room and room block excavation, along with refinements in mapping and small-scale surface collection. While data are still being assessed, initial results have provided an enhanced understanding as to the regional development of the Pampa Mojucape along with the sociopolitical, economic, subsistence, and ritual activities that were a part of the *milieu* of daily life for residents at both sites (see Swenson 2008, 2010; Swenson et al. 2008, 2009, 2010; Warner 2006a, 2006b, 2007, 2008).

This present work is of extraordinary value for a number of reasons – especially given recent developments within the southern Jequetepeque Valley. As discussed briefly in Chapter 3, the Pampa Mojucape has been used periodically for expedient, temporary agricultural production, especially during the waning periods of ENSO events. While these activities were certainly archaeologically destructive, they have been conducted on a relatively small scale, which has mitigated damage to the vast majority of the pampa. In 2009, however, it was made clear to members of Proyecto Jatanca/Huaca Colorada by officials from Lima that a highway (*Autopista del Sol*) is to be built across the Pampa Mojucape. Once constructed, this road will by-pass key regional cities such as San Pedro de Lloc and Pacasmayo, resulting in perhaps adverse, local economic conditions and the benign neglect of local roads that currently connect the cities. Furthermore, according to initial survey maps shown to project members in 2009 by transportation officials, the *Autopista del Sol* will run adjacent to, if not right through, Je-205. Even if it is diverted, the *autopista* will provide easy access into the site and likely result in increased looting and architectural destruction. Therefore, it seems likely that work initiated in 2004/2005 may end up representing an unintended salvage project.

For the immediate future, however, much work remains to be undertaken at Jatanca. The recovery of ceramics from intact archaeological context, especially in relation to standing architecture, is of major importance – especially with regard to examining recent ideas proposed by Millaire (2009) and Donnan (2009). The continued identification of shared domestic ceramic surface treatments between Late Formative Period sites along the North Coast would substantiate their contention that there was a shared Norcosteño ethnic "substrate" that made up coastal populations through the Early Intermediate Period (Donnan 2009; Millaire 2009). Furthermore, the identification of elite wares within similar intact context may provide additional insight into the contention that they were produced exclusively for the leaders of a given polity and represent perhaps site-specific forms of corporate organization (Millaire 2009). Furthermore, work at Jatanca has indicated that there may be subtle changes in domestic types. Obviously, the identification of any chronological subtleties would aid greatly in expediently dating other Formative Period sites within the valley and might shed further light on the viability of the Norcosteño model of regional sociocultural development.

Along these same lines, understanding Jatanca's role within the Jequetepeque Valley from a sociopolitical and economic perspective would be aided greatly by conducting formal excavations within smaller Formative Period sites identified initially by the Dillehay/Kolata survey (1997-2001). While these sites, located generally within the lower middle valley, or near valuable natural resources, have been identified as having a Formative Period component, recent work by Millaire (2009) and Donnan (2009) indicates that the use of domestic wares in identifying site chronology may be problematic due to the fact that some, if not many types appear to have undergone little in the way of change throughout much of the Formative Period (but see also Chapter 4). Therefore, excavation in these outlying settlements (scheduled by Proyecto Jatanca/Huaca Colorada for 2011) will allow for the acquisition of carbon and ceramics from intact architectural deposits and permit further refinement in the chronology of this material within, at the very least, the Jequetepeque Valley. Ultimately, excavation within these sites, and further refinement in the Formative Period ceramic sequence will enable researchers to better-develop more specific aspects of the *Norcosteño* model of North Coast sociopolitical development during this critical period of cultural development.

Continued excavation within and around Jatanca will also enable those associated with Proyecto Jatanca/Huaca Colorada to better-understand the architectural organization of the site itself – especially in terms of identifying activity areas, or room-specific functions and the organization of surrounding agricultural activity. Since 2005, mapping, surface collecting, and excavation has resulted in the identification of sociopolitical and ritual complexes such as the Primary PRPCs, Secondary PRPCs, PDSP Complexes, and the Stair/Ramp Room in Compound II (Swenson et al. 2008, 2009, and 2010). The location of these important areas within restricted compound interiors that were suitable for a wide-range of group activities has not only provided fundamental architectural and spatio-organizational information, but provided evidence indicating the presence of distinctions in social status, the influence of proxemics in interior spatial layout, insight into the staging of large events, the possible presence of a duality-based system of sociopolitical organization, and the likelihood that the Chimú were inspired by long-abandoned Formative Period compounds in the development of their own compound-style architecture. Ultimately, the above work has led to an enhanced understanding of Prehistoric North Coast development during the Late Formative Period.

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2010 The Selective Representation of the Past in Architecture: An Example from the North Coast of Peru. Paper Presented at the 75th Annual Meeting of the Society for American Archaeology. St. Louis, Missouri.

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2003 Untangeling the Ties that Bind: The City, the Countryside, and the Nature of Maya Urbanism at Xunantunich, Belize.

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1995 Orienting Collapse. In *The Collapse of Ancient States and Civilizations*. Norman Yoffee and George Cowgill (Eds.). pp. 1-19. University of Arizona Press: Tucson and London.

Yoffee, Norman
1997 The Obvious and the Chimerical: City-Sates in Archaeological Perspective. In *The Archaeology of City-States: Cross Cultural; Approaches.* Deborah Nichols and Thomas Charlton (Eds.). pp. 255-264. Smithsonian Institution Press: Washington D.C.

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2005 *Myths of the Archaic State: Evolution of the earliest Cities, States, and Civilizations.* Cambridge University Press: Cambridge and New York.

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2007 Peering into the Palimpsest: An Introduction to the Volume. In *Negotiating the Past in the Past: Identity, Memory, and Landscape in Archaeological Research*. Norman Yoffee (Ed.). pp. 1-9. The University of Arizona Press: Tucson.

Zuidema, Tom
1990 Dynastic Structures in Andean Cultures. In *The Northern Dynasties: Kingship and Statecraft in Chimor*, Michael Moseley and Alan Cordy-Collins (eds.). pp. 489-506. Dumbarton Oaks: Washington, D.C.

Curriculum Vita

John Powell Warner

Education

University of Kentucky 2004
MA in Anthropology

University of Central Florida 1994
BA in Anthropology

Grants and Awards

2009-2011
Social Sciences and Humanities Reserch Council of Canada
$160,000
"Ritual Performance and the Politics of Everyday Space in Jequetepeque, Peru"
written as project co-director and collaborator with Edward Swenson

2005
National Science Foundation Dissertation Improvement Grant
$11,995
"Processes of Urbanization nd Sociopolitical transformation at the site of Cañoncillo, Peru"
written as co-principle investigator with Tom Dillehay

Courses Taught at Eastern Kentucky University

1. *Ant 201 – Physical Anthropology* – This course examined issues related to the intersection between human biology and culture, with a special emphasis placed upon areas of human evolution and adaptation. Some of the specific topics covered in this course include human evolution, adaptation to diverse environments, contemporary human variation, and the perception of race.

2. Ant 365 –Monkeys, Apes, and Humans – This course examined issues related to primatology from a primarily cultural anthropological perspective, with special emphasis placed upon what primatology studies can and cannot tell us about prehistoric human organization, behavior, and culture. Specific topics covered in this class include taxonomic systems, primate evolution and social organization, and primate communication.

3. *Ant 365 – Human Evolution* – This course examined issue related to the field of paleoanthropology and the study of hominid evolution, with a special emphasis placed upon the relationship between hominids and their environment. Specific topics covered in this class include adaptation and evolution, osteology and taxonomy, tool industries,

and philosophical/methodological differences between the scientific method and intelligent design.

Courses Taught at the University of Kentucky

1. Ant 101- Introduction to Anthropology – This course served as an introductory survey into the development of the four sub-fields of anthropology with special emphasis placed on the holistic nature of the discipline, and the methods employed by each sub-field.

2. Ant 160 - Cultural Diversity in the Modern World – This course provided an in-depth examination of contemporary cultural diversity within the modern world. Topics such as race, subsistence economies, cultural development, and political systems are examined in detail.

3. Ant 161 - The World of Peasants - This class provided the student with an in-depth understanding of the political economy that surrounds the formation of peasant societies from both an archaeological and contemporary perspective. The historical development of peasant society, the world economy, and peasant/state relations are among the topics covered by this class.

4. Ant 241 – Origins: Old World Civilization – This course examined the development of societies within the Old World, with a special emphasis placed upon those from Mesopotamia and Egypt. Some of the specific topics explored include the agricultural revolution, the functional and symbolic use of monumental architecture, the urban condition, and the development of writing and markets.

5. Ant 242 – Origins: New World Civilization – This course examined the diverse development of societies within the New World with a special emphasis placed upon the various cultures of Central and South America. Some of the specific topics explored include the importance of ceremony and ritual, the development of social stratification, and the complex meaning behind mortuary systems.

6. Ant 312 – Comparative Civilization – This class used a comparative approach in examining the development of civilization throughout the world – with a special emphasis on the formation of urbanism and state society. Typically, this class covered material related to prehistoric economic organization, the role of agriculture and state development, and the meaning of space and architecture.

Archaeological Field and Laboratory Work

June 2010 through August 2010	Co-Director (with Dr. Edward Swenson): Proyecto Cañoncillo, Peru Continuation of excavation, mapping and ceramic analysis begun in 2004 -2005

July 2009 through August 2009	Co-Director (with Dr. Edward Swenson): Proyecto Cañoncillo, Peru Continuation of excavation, mapping and ceramic analysis begun in 2004 -2005
June 2008 through August 2008	Co-Director (with Dr. Edward Swenson): Proyecto Cañoncillo, Peru Continuation of excavation, mapping and ceramic analysis begun in 2004 -2005
June 2007 through August 2007	Co-Director (with Dr. Edward Swenson): Proyecto Cañoncillo, Peru Continuation of excavation, mapping and ceramic analysis begun in 2004 -2005
July 2004 through August 2005	Director: Proyecto Cañoncillo Dissertation research in the Jequetepeque Valley, Peru Survey, mapping, excavation, ceramic analysis
June – August 1997, 1998, 1999	Lower Jequetepeque Valley Project, Pacasmayo Peru Directed by Dr. Tom Dillehay – Vanderbilt University and Dr. Alan Kolata – University of Chicago Survey, excavation, and ceramic analysis
August 1997	Proyecto Cerro Guitarra, Zaña Valley, Peru Directed by Dr. Jack Rossen – Ithaca College Household excavation within a pre-ceramic site
Sept. 1995 through May 1996	Research Assistant Dr. Tom Dillehay - University of Kentucky. Archaeological data entry, research, and general laboratory work
Summer 1995	Research Assistant for Dr. Mary Powell - University of Kentucky. Computer entry of burial records for the N.A.G.P.R.A. program. Human osteological analysis
April-May 1995	Field Assistant for the Caracol Project, Caracol Belize Directed by Drs. Arlen and Diane Chase - University of Central Florida. General field and laboratory work
February-June 1993	Field Assistant for the Caracol Project, Caracol Belize Directed by Drs. Arlen and Diane Chase - University of Central Florida. General field and laboratory work

Publications:

2009 Dillehay, Tom, Edward Swenson, Alan Kolata, **John P. Warner**, and Paige Silcox "Descripción de Sitios arqueológicos del Jequetepeque, Peru." In, *Paisajes Culturales en el Valle del Jequetepeque: Los Yacimientos Arqueológicos.* Eds. Tom Dillehay, Alan Kolata, and Edward Swenson. SIAN:Lima, Peru (Distributed via Univesity of Pittsburgh Press).

Site Reports Authored/Co-authored:

Swenson, Edward, Jorge Chiguala-Azabache, and **John P. Warner**

2010 *Informe Sobre la Investigación Arqueológica del Proyecto Jatanca en el Valle de Jequetepeque, Campaña de 2009*. Technical report submitted to the Instituto Nacional de Cultura. Lima, Peru.

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Warner, John P.

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Dillehay, Tom D., Alan L. Kolata, Edward Swenson, Jeff Stvan, and **John P. Warner**

1999 *Informe Sobre la Investigación Arqueológica del Proyecto Pacasmayo en el Valle de Jequetepeque, Campaña de 1999*. Technical report submitted to the Instituto Nacional de Cultura. Lima, Peru.

Dillehay, Tom, **John P. Warner**, José Iriarte, and Alan Kolata

1998 *Informe sobre la investigación arqueológica del Proyecto Pacasmayo en el valle de Jequetepeque.* Technical report submitted to the Instituto Nacional de Cultura. Lima, Peru.

Papers Presented:

Warner, John P.

2010 "The Selective Representation of the Past in Architecture: An Example from the North Coast of Peru." Paper Presented at the 75th Annual Meeting of the Society for American Archaeology. St. Louis, Missouri.

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2008 "Social Memory, Cultural Archaism, and the Politics of Spatial Production: The Compounds of Jatanca, Peru." Paper Presented at the 73rd Annual Meeting of the Society for American Archaeology. Vancouver, British Columbia.

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2007 "An Examination of the Plaza/Ramp/Platform Complexes of Cañoncillo, Peru." Paper presented at the 72nd Annual Meeting of the Society for American Archaeology. Austin, Texas.

Warner, John P.

2006 "New Investigations in Cañoncillo Peru: Urban Architectural Development on the North Coast ofPeru." Paper presented at the 71st Annual Meeting of the Society for American Archaeology. San Juan, Puerto Rico.

Symposia Organized/Co-organized:

2006 *New Approaches to the Study of Andean Urbanism*. 71st Annual Meeting of the Society for American Archaeology. San Juan, Puerto Rico. Co-organized with Edward Swenson.

Senior Thesis Mentor at Eastern Kentucky University for the Following Students:

Maurya Delgado – "Effectiveness of Acetabulum in Age at Death Estimation"

Other Qualifications/Experience:

Proficient in Spanish